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ORIGINAL ARTICLES.

EXCISION OF THE CLAVICLE.

BY N. B. CARSON, M. D., of St. Louis.

There seems to be doubt as to whom is to be credited the honor of having first excised the entire clavicle. Treeves¹ gives McCreary, of Kentucky (1811), the credit of having first removed this bone in this country, while Gross² says that Remmer was the first to excise the clavicle in 1732, while Rudulf Zabel³ says the oldest known total extirpation of the clavicle was done by Moreau and D'Angerville of Paris, in 1765, and that the operation by Remmer, which by most authors is considered the oldest, was without doubt not a total but only a partial extirpation. O. Heyfelder⁴ gives credit to Meyer for total (1823), and to Cassebohm for partial extirpation (1719). A careful consideration of the literature leads me to conclude that Zabel is correct and that Moreau and D'Angerville were the first to perform total extirpation of the clavicle.

The bone has been removed entirely or in part for caries and necrosis, morbid growth and displacements the result of disease. Gross says Mr. Davie, many years ago, excised the inner extremity of the clavicle in a case of dislocation backwards from deformity of the spine, the luxated head causing such a degree of pressure upon the esophagus as to endanger life by inanition.

The transactions of the London Pathological Society record the removal of a few examples of sarcoma of the clavicle post-mortem. In one instance the growth produced death by pressure on the trachea within seven weeks after its known commencement.

The operation of excision of the clavicle, in part or entirely, on account of caries or necrosis has been to me a very easy operation, although some writers consider it quite serious. Several times I have removed quite a considerable part of this bone involving one or the other of the extremities or shaft, and have not considered the procedure worthy of more than bedside note, as the operation consists of simply enlarging the already existing opening and lifting the diseased fragments from their bed.

On the contrary, the excision of the clavicle for morbid growth is an operation of the most serious character, both on account of the immediate

and ultimate dangers. Velpau³ calls the operation a daring attempt, never carried into effect except in a few cases of operation upon the shoulder. "Yet," he says, "there are circumstances sufficiently numerous which require this operation if we wish not to abandon the sufferers to certain death!"

Gross⁷, in speaking of the difficulties presented by the two operations, the one for necrosis and the other for tumors, says, "But the case is widely different where the clavicle is buried in a large mass of disease; when the circumjacent structures are all intimately matted together by morbid deposits; and where not only the great vessels of the neck, but likewise the principal nerves and thoracic duct are in close proximity to the affected bone, as in the case of Mott," (requiring over forty ligatures and four hours for its completion.) "Under such circumstances the operation must be of extraordinary difficulty, demanding the greatest patience, skill and anatomical knowledge for its successful execution."

While I can appreciate the difficulties that may be encountered in this operation, I was much surprised at the ease with which it was accomplished in my case, although the tumor was of large size and involved the external end. A study of the literature also made me think the dangers more imaginary than real, and that the operation, with ordinary care and a thorough anatomical knowledge, should be one of very small mortality.

Searching the literature I find forty-nine well authenticated cases of removal of the clavicle, in part or entirely, for tumors simple or malignant, with forty-two recoveries and seven deaths, a mortality of 16 per cent.; of these, forty were for osteo-sarcomas and four carcinomas, three simple or non-malignant, and in one the character of the growth was not given.

Delatour⁸ has collected forty cases, with a death rate of 18 per cent., and Barling twenty-four cases, of which number six died within five weeks, but in two of them death cannot be attributed to the operation as one died from brain tumor, the other from hæmatemesis. Barling thinks this rate, 16 per cent., may be unduly low, as some of the unsuccessful cases probably remained unrecorded. Of the eighteen patients who recovered he has been able to trace only twelve, and some of those but for a short time. Five were either dead or dying, or recurrence within twelve months of excision. Four were well at periods varying from three to twelve months after the operation, and of the three remaining one was alive three years and another ten years, while the third one, Mott's case, remained well fifty-four years.

Of the forty-nine cases collected by me I find the records of eighteen, including Barling's three cases, of these nine survived the operation from two to fifty-four years, eight died from return of the disease in from eleven days to five months, and one died within three months from fracture of the skull. From a study of the reports of cases one must be

impressed with the utter improbability of arriving at any satisfactory conclusion as to the ultimate results in these cases, and whether with the high mortality the operation is justifiable. Barling says, "In estimating the degree of malignancy of these growths of the clavicle, one is hampered by the absence of exact information as to the nature of the tumor, and as to whether it arises from the periosteum or the medulla of the bone. I think, however, that the details I have related are sufficient to show that the immediate mortality of excision of the clavicle for growth is not so great as might have been anticipated, and that the prognosis as to recurrence and dissemination is better than it is after amputation for sarcomas of the bone of the lower extremities."

It is remarkable how little deformity follows in the cases that recover from the operation, and how little impairment of function results, and how rapidly function is restored. "In Traver's case the boy had complete power over his arm in all directions, and only a few months after the operation was amusing himself by rowing on the Thames." Jesset's case, "eleven weeks after the operation had perfect motion of the arm in every direction, being able to play the piano, dress her hair, etc." Brittons' case, a coal heaver, was able to use his pick as well as ever, and could carry heavy weights on the shoulder from which the clavicle had been excised, while on the sound side he had no such power." Caddy, speaking of the result in his case says, "The movements were perfect, and being a well drilled man he took care that his right shoulder should never drop, so that when clothed no one could notice any difference in the two shoulders; this was probably due to the fact that the outer third of the clavicle being left behind, the clavicular attachments of the trapezius and deltoid muscles were not interfered with. In my case the patient could move the arm more or less freely when she left the hospital, but it was too soon to determine what would be the result as to restoration of function. The patient, a young woman of eighteen years of age, came under my care in the hospital on February 2, 1904, giving the following history: No hereditary disease in family known, habits good, had usual diseases of childhood without bad results, was never very strong or healthy. Last July, after an attack of measles, felt pains at sternal end of clavicle and along sterno-cleido muscle of right side. About two weeks later noticed some enlargement. Part continued painful with occasional sharp, shooting pains. The tumor increased slowly until about two months before coming to the hospital. It then commenced to increase rapidly, and when I saw her the growth extended from near the middle of the clavicle and stood 5 C. M. above the surface, and was 10 C. M. in length, while it measured downward $9\frac{1}{2}$ C. M. and obliquely $9\frac{1}{2}$ C. M. Physical examination revealed nothing abnormal. Urine examination normal. Blood count: White corpuscles, 7,440; red, 4,160,000. Hæmaglobin, 45 per cent. The operation was done on February 8th, and required forty minutes and only one ligature. The

patient made a good recovery and left for home February 20th. While in the hospital she had pains involving the sciatic nerve, which led us to suspect a possible involvement of the cauda equina, which proved a correct conclusion, as these pains increased to such an extent as to require three grains of morphine daily. Dr. Jones, who had charge of the case, wrote me that the patient died on the 26th of April, the tumor having returned at its original site with metastasis in the frontal and occipital region of the scalp, and in the inferior maxilla and probably in the spine.

Since writing the above*Dr. J. C. Morfit, of St. Louis, has removed the entire clavicle, the upper portion of the sternum, and the sternal end of the first and second ribs for osteo-sarcoma of the sternum and the sternal end of the clavicle. The operation was done on the 4th of August and up to this time (August 11th) the patient is doing well.

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PSYCHOTHERAPY IN CHILDHOOD.

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The moral influence which the physician can have over young patients is considerable. This influence may be used therapeutically, although the majority of practitioners neglect it. Many among them use psychotherapy without knowing, but all physicians would be the gainers by appreciating this part of therapy, which should play a role in the treatment of very many diseases. Psychotherapy demands, on the part of the physician, constant good humor, a countenance smiling without effort, a sobriety of manner studied but apparently natural, an attitude calm but not frigid, firm but not hard. In short, one must be consciously composed without seeming to be so. This is particularly indispensable in the first interview, so often decisive for the authority of the physician over his patient, for the confidence of the patient in his physician.

Adults, more sensible to delicate variations of impressions, appreciate these things better than children, but the latter are by no means insensible to these influences, and the physician should recognize this.

Thus in the case of even young children, we should approach them quietly, without brusqueness, and calmly with a countenance expressive of kindness and good intent. But it is often necessary to use firmness in recalcitrant cases. If persuasion does not succeed, force without brutality should be used resolutely (hand of iron in the velvet glove).

It is necessary to give directions with authority, to speak with assurance of voice and preciseness of mien. One can reassure by well-chosen words, by the promise of immediate relief and early cure. Such procedure comforts the patient and has a very good effect.

In nervous diseases, the psychoneuroses, psychotherapy is indispensable and all sufficient. A psychic disease yields to psychic treatment (Dubois). For instance, all manifestations of hysteria may be relieved by suggestion. Children, even when young, yield to suggestion very readily, and I have succeeded by this means in rapidly curing astasia-abasia, hysterical paralyses, tremors, various tics, nervous dyspnea, hysterical coxalgia, etc. In neurasthenia, psychic treatment is necessarily of much longer duration, but it can be successful if used with method and perseverance.

In order that psychotherapy be successful, it is necessary, very often, that the child be isolated away from its immediate family. Thus removed from its own people, it obeys the suggestion of the physician much better and recovers more rapidly.

The use of psychotherapy does not exclude other methods of treatment. It may be advantageously combined with rest, alimentary hygiene, hydrotherapy and kinesotherapy, etc.

When an older child, an adolescent youth or a young girl, shows sudden bizarre manifestations, certain weakness which is not to be explained, certain exaggerated pains, it is necessary to avoid laying too much stress on such symptoms to avoid taking them too seriously. Their recital should not be listened to with an air of too much sympathy nor should any alarm be manifested. Because otherwise the symptoms themselves become aggravated in the mind of the patient, the complaints become much increased in their intensity, through a process of veritable suggestion which increases the gravity of the condition in the patient's eyes immeasurably. Thus a slight fall, followed by transient pain, if treated in the wrong way, as by the application of compresses, enforced rest, etc., may be the starting point of an hysterical coxalgia or an astasia-abasia. It is much better to treat the whole affair lightly, even with indifference or disdain, in order to reassure the child and prevent his acquiring a neurosis. If necessary, such maneuvers as massage, gymnastics or passive movements may be used to aid in the process of suggestion. Such measures act better on the mind of the child

than on the disease itself. If it is too late, if the psychoneurosis has already taken form, the task of the psychotherapist becomes much more difficult. But even then by auto-suggestion, or by the suggestion of the immediate family or of the physician, success will come if enough confidence is had in the psychic means of treatment. According to the individual case, the procedure will be brusque or devious and strategic. Appeal will be made to the reason of the patient. He will be made to master his nerves and to put into play all his moral energy. And success will come in one, two or it may be in several trials.

I was called recently to see a boy of seven years, very nervous (father a neurasthenic, mother the victim of migraine), who had suddenly been seized with severe pain in the left knee with absolute loss of function. He refused to walk and kept the leg flexed on the thigh. When he was put down he cried and hopped on the sound leg. Parents very much frightened. I was not able to detect any redness or swelling or any sign of arthritis about the knee. The movements of the thigh on the pelvis were free without muscular contracture (no coxalgia). General condition good; no fever. I ordered rest and a sedative. Next day, condition unchanged. Persuaded that there was nothing wrong, I stretched the child on a bed, played with him, executed the movements of flexion and extension of the leg on the thigh, grasping both feet I stretched the whole body, drawing the child from the head to the foot of the bed, pretending to draw a sled. The child laughed aloud and forgot his trouble. I put him on the floor, when he refused to walk, complaining again of the pain in his knee. Speaking then with a certain authority, I said to him: "This is nothing, and tomorrow at this hour you will be able to walk. If not, your people will telephone me and I shall come again." The next day the child walked and played about the room; he was cured. If instead of such psychotherapeutic treatment, this treatment of disdain, the leg had been wrapped with compresses or bandages, or had been immobilized in a splint, an hysterical coxalgia or an astasia-abasia would probably have been set up, which would have lasted for a greater or less length of time.

In two girls of ten and twelve years, who had nervous dyspnea pushed to the point of cyanosis of the lips (in one case the diagnosis of adherent pericardium had been made), I dissipated all symptoms in two or three sessions by suggestion. Having examined the children in hospital and discovered that there was nothing wrong with heart or lungs, I said to them: "I have examined you from head to foot without discovering any diseases; you can get well very quickly if you wish. Your manner of respiration and your attacks of suffocation are purely nervous; I forbid you to breathe in this manner; you can easily make your breathing slower; these performances of yours are ridiculous. If you want to leave the hospital, and you do, you will have to breathe like everybody

else." Cure was complete in two days in one case and in three in the other.

All hysterical manifestations in childhood are thus curable by suggestion, by conversation, alone, without the use of hypnosis, electricity, douches or bromides.

To succeed, the physician must give out some of his own personality. He will inspire confidence in his patients, he will become their friend by showing them his interest and his sympathy, sometimes even by shocking them; always showing, however, that he is occupying himself with their case. He must speak easy to his patients without having the air of being hurried, without prolonging the interviews (which must be repeated sufficiently often) unnecessarily.

In this way one may rapidly acquire an influence over the spirit of his patients, may then begin the education of their will power, may show them the art of controlling their actions, their ideas, their false and unreasonable conception of things, their illusions, etc.

The external manifestations of which these patients complain, such as the pains, the tremors, the paralyses, etc., do actually exist, but it is after all the brain which perceives them, which governs, makes them less severe and even, at times, causes them to disappear. But it is necessary to will to do, that is, to put in play a psychic force. This psychic force exists latent, ignored, dormant, in a brain which is unbalanced. It is the duty of the physician to reawaken this force in his patients, that it may be serviceable, by his presence, his kindness and his wise counsels.

HARVEST WOUNDS.

By D. W. BASHAM, M. D., of Wichita, Kansas.

I have chosen the theme Harvest Wounds, because this heading may be made to include wounds inflicted by the corn sled and the ordinary corn knife, as well as injuries inflicted by the reaper sickle.

I do not regard the reaper nor the mowing machine as being such a prolific source of serious injuries as the corn harvester, most of which are armed with a large knife in place of a sickle.

In the case of the reaper, which is a highly perfected agricultural implement, the operator is securely seated at a safe distance from the dangerous parts of the machine, and when obliged to descend in order to lubricate the machinery or remove obstructions from the sickle guards, or repair a broken part, he is able to stand behind the sickle bar while at work, thus diminishing the danger of accident.

It is very different in the case of the corn harvester, which is less highly perfected in point of mechanism, and which varies in form from the crudest efforts of the blacksmith in the country to some very efficient models by the large manufactories.

The corn harvester is productive of many deep joint wounds, the joint often being laid open and exposed in its entirety. Often, when the joint is not involved, the muscles, tendons, blood vessels and nerves are severed down to the bone.

It is quite evident that wounds of this kind demand extraordinary skill in their treatment, for we must always bear in mind that simple healing is not, unless accompanied by restoration of function, the ideal aim of surgery.

The corn sled is the most dangerous of agricultural implements, and is productive of many wounds of a serious nature every autumn. Corn sled injuries generally involve the lower part of the leg, and the foot. They are generally the result of accident, as slipping of the leg in front of the knife while the sled is in motion. The muscles and other structures of the calf may be divided down to the bone. The ankle-joint is sometimes opened in this way.

The bleeding is often profuse, and these wounds are often seriously infected and treated in the very worst manner possible by a fellow-laborer or other unskilled persons in the effort to render assistance in arresting hemorrhage.

These wounds are sometimes filled with filthy materials to induce coagulation of the blood, and sometimes the limb is corded far above the injury until permanent damage is done to the circulation.

It will be seen that corn sled wounds are usually incised wounds. Wounds produced by the ordinary corn knife usually involve the knee joint or the anterior tibial surface of the leg, and as a rule the left leg is the site of the injury.

The reaper generally inflicts a ragged, lacerated wound, or a punctured wound, according as to whether the moving sickle or the sickle guard is the vulnerating agent. The pointed guard shielding the sickle is sometimes driven into the hand or foot or other part of the arm or leg.

Fingers are sometimes lopped off by a sickle, and frightful lacerations of the soft tissues, covering the shafts of the long bones of the forearm, or the leg, are often seen. The ankle joint is sometimes laid open by the sickle and pieces of clothing or other extraneous material may be carried into the tissues.

Occasionally there is a crushing injury of the fingers, due to getting the fingers engaged in a cog-wheel system.

Injuries inflicted by the threshing machine nearly always involve the hand and forearm, and are the result of allowing the hand to come in contact with the cylinder. The vessels and nerves are often reduced to shreds, thus endangering the vitality of the member.

Without going more into detail in the classification and description of these wounds, it will be readily seen that every principle of surgery may be involved in their management.

It is often necessary to suture the divided tendons and nerves. Some-

times the belly of a muscle, or even a set of muscles is destroyed, and it may be necessary, in order to have healing with restoration of function, to implant the remaining part of the tendon into a neighboring muscle.

The fact is, in repairing one of these wounds you should be governed by the same principles that you would observe in putting a piece of machinery together; that is to say, reunite the divided structures, leaving everything as nearly as possible as it was before the accident. Sometimes an inch or more of a tendon may be destroyed and it will be necessary to lengthen the tendon so as to be able to approximate the ends without too much tension.

If a main artery is divided, it is perhaps right to endeavor to suture the vessel, but the procedure usually results in thrombosis and occlusion, and the result is exactly the same as if the vessel had been ligated. Even the fascia should be reconstructed in its normal extent and relations to the other tissues, in order that the muscles may glide in their own proper sheaths, and that the articulations and the digits may recover their full functions when healing is complete.

In the treatment of a seriously lacerated wound, as is very often seen when the hand has come in contact with a rapidly revolving cylinder of a threshing machine, it may be a question of immediate amputation or endeavoring to save the limb.

An effort to preserve the member should always be made if there is reason to believe that there is left arterial blood supply to maintain vitality.

There are two good methods of procedure in the management of these doubtful cases: Constant irrigation with warm saline or boric solution and enveloping the injured part in dressings wet with the solutions and maintaining warmth by the application of hot bottles to the outside of the dressings. Constant immersion in sterile normal saline solution is a good method, where there is not too much capillary oozing from the wounded parts.

Heat is a valuable means of diminishing the danger of gangrene.

Sometimes the haemostatic constrictor is applied to arrest hemorrhage during the removal of the patient from the field, or while waiting for the surgeon to arrive.

Laymen often employ a piece of cord as a tourniquet, and as a rule it is applied far above the location of the injury, thus inviting gangrene and facilitating its extension to parts not involved in the injury.

Sometimes physicians commit this same fault. When no regular tourniquet nor Esmarch apparatus is at hand a number sixteen or eighteen soft rubber catheter makes an excellent extemporaneous device.

The tourniquet should be applied just above the injury, that in case of amputation or supervention of gangrene no more tissue may be sacrificed than necessary.

In case of an incised wound of a joint the cavity of the articulation should be abundantly irrigated with warm saline solution and the joint should be closed in by approximating the structures layer by layer with catgut sutures with all the care and precaution that we employ in caring for the peritoneum in performing a coeliotomy.

The tendons should be brought together *seriatim* and stitched with catgut where they have been divided in front of a joint.

The large nerves should also be sutured.

The surgeon should not become discouraged nor suffer his patient to do so if motion does not return as soon as a wounded joint is healed, for if suppuration has not been present there will be a certain degree of function restored after a time more or less delayed.

In the case of bisection of the large tendons, like the Tendo-Achilles, which is often divided in corn sled accidents, much difficulty may often be encountered on account of the tendency of the sutures to cut out and allow the ends of the tendons to retract.

There are two ways of evading this difficulty which may be employed separately or in conjunction. The one is to lengthen the tendon by cutting half way through its substance at a distance of an inch and a half or two inches from the end, then splitting down to within half an inch of the extremity and turning the upper end of the split tendon down to meet the lower fragment.

The other is to flex the leg in such a way as to take the strain off the tendon and thus prevent the stitches cutting through. In fact when tendon suture is done in any case whatsoever the articulation should be flexed or extended as the case may demand to diminish the tension in the muscle or set of muscles involved.

Preliminary cleansing of foreign material and the disinfection of wounds are, of course, matters of undisputed importance in beginning the treatment of any traumatism, and their worth cannot be exaggerated in regard to the class of injuries now under consideration.

There is no better agent known than mercuric chlorid, intelligently employed. A one-to-two-thousand aqueous solution is strong enough to render the tissues free from infection. It is well to follow the use of the bichlorid with a normal salt or boric acid irrigation to lessen the likelihood of sublimate poisoning from absorption.

Drainage is another matter of importance in the management of these injuries. They are not like clean operation wounds whose smooth surfaces unite in two or three days, but on the contrary there are many pockets and dead spaces to fill with secretions from the torn surfaces.

The employment of immense rubber tubes or large pieces of gauze or wicking as drainage is not necessary, and is perhaps to be deprecated, but a few strands of sterile silk or silk-worm gut are sufficient and should always be placed where accumulations are most likely to occur. Two to four days is ample time to drain an aseptic wound.

SOME FACTS TO BE CONSIDERED IN THE TREATMENT OF INEBRIETY.

BY T. D. CROTHERS, M. D., of Hartford, Conn.

Every year brings an increased necessity for more practical knowledge of the spirit and drug takers, who are constantly increasing in all circles of society. Already the disease of inebriety is outlined, and the vast chains of conditions and causes stretch out into wide, unexplored fields that are governed by laws which will be clearly understood in the future. The great army of inebriates, projected from the front line of civilization, extending back through all grades of society, are but the victims of physical causes, and the results of conditions which await further study. Such study must be thorough and exhaustive, and include all the conditions of inheritance and surroundings of mental and physical life, and of the time and circumstance of the first toxic use of alcohol. From these facts will appear some of the laws which control the development and progress of this malady. The following statement will represent the problem in its general bearings: Among all classes, and in all sections, are found men and women who persistently use alcoholic drinks to excess, suffering both directly and indirectly in health, character, position, also in social and pecuniary interest. This they continue to do, against all motives of self-interest, influence of others and considerations of right and wrong, either slowly or rapidly going down to ruin and death. Through all this there is an appearance of health, and often a keen recognition of the situation, but rarely any successful effort to recover. Looking at these cases more clearly, they seem to begin in some regular order and follow a line of conditions and circumstances that are more or less uniform. That is, we may recognize a general chain of cause and effect, and note a continuous progress in each case, which is parallel. This suggests a physical origin, and if we make a record of the symptoms of two cases, as seen month after month, a more striking similarity will appear. Not unfrequently this is so marked that we can predict, from some general knowledge of the patient, much of the future progress of the case.

The form and character of the degeneration in inebriety will be found to be very closely related in all cases and to follow a natural course from stage to stage. It may be stated that a careful study of inebriety indicates certain conditions of body and mind which either intensify or antagonize the development and progress of this disorder. No application of means or remedies that are not based on these facts, or that do not recognize the physical changes which have taken place, can give any promise of permanency in the treatment. Here, as elsewhere, we must recognize the causes before any intelligent treatment can be applied. In inebriety we have two prominent factors always present in the causation of each

case. The first and most prominent to the general observer is the use of alcohol; this may be both a primary and secondary cause, but in either case there are certain pathological changes always present during the progress of the case marked by certain fixed symptoms that rarely vary or change. The second are the conditions of degeneration, either inherited or acquired, that are present before alcohol is used, and break out into an inordinate desire for alcohol, or conditions of exhaustion, for which this drug seems to give relief. In the former case, where alcohol appears to be the primary cause, there will be found many complex conditions; pathological changes coming from the different alcohols that are practically unknown. Recent studies have shown that the toxical action of different alcohols depends upon the kind of alcohol, the substance from which it is made and the process of manufacture, also the natural chemical combinations which follow after its manufacture. These different alcohols, when taken alone, produce different physiological effects on the body. For instance, one form of alcohol will cause profound stupor, another will produce intense hyperæmia of the brain and delirium, a third is followed by muscular tremors and reduction of temperature, etc. The study of a few of these alcohols seems to indicate that each one has a special physiological action over the brain and spinal cord. If we consider the almost numberless forms of alcohol, and their equally complex combinations in the various forms of drink used, and the still more uncertain physiological actions on the body, the magnitude of the subject will be partially seen. Practically, from this we may realize some of the many causes which result in inebriety. The only wonder is that the effects of alcohol are not more pronounced and fatal in each case. In the second factor are conditions of degeneration, either inherited or acquired, present before alcohol is used, which develop into inebriety or produce conditions of exhaustion for which alcohol is used to give relief. The active causation of inebriety, from inheritance, appears in either a direct or indirect form. In the former it follows directly from father to son, or from family to family, and is manifest in childhood by a perverted brain and nerve force, and disturbed functional activities. In the latter it is often more remotely inherited, as from the second generation back, and breaks out from the application of some peculiar exciting cause. Next to inheritance, directly from inebriate ancestors, are degenerative conditions of the organism following all the various forms of insanity and epilepsy; and consumption and many of the nervous diseases, followed by intense exhaustion; all these transmit a diathesis to the next generation, which often appears in inebriety. Another series of causes will be found in the bad and imperfect nutrition of childhood. This period of life, between four and fifteen years of age, is often the starting point of inebriety. The natural degenerations, from both quality, quantity and irregularities of food, also over-stimulation of the brain and nervous

system, break out in inebriety in manhood. Again, climate, occupation, education and surroundings are active causes which enter into many cases, modifying and changing the progress materially. All these factors are more or less present, and enter into the causation of nearly all cases of inebriety. Up to this time few studies have been made in this direction, and the general term of "vice" has been given to every obscure condition of inebriety. Inebriety not only appears as a result of perversions and degeneration of the brain and nervous system, following the direct use of alcohol, but it is often a symptom, and follows other diseases as a hint of degeneration in certain cortical brain centers, notably in general paresis, epilepsy, tumors of the brain and reflex irritations, dementia, melancholia, etc. Inebriety not unfrequently merges into acute mania and other diseases which pass rapidly to a fatal termination. The range of causes in inebriety is very complex, involving many conditions that require careful study from a scientific standpoint.

The special question of treatment resolves itself into two general facts: First, the special appliances and methods of treatment which are indicated by the present study of inebriety, as successful in the cure of these cases; second, preventive measures and hygienic means that will lessen the number of persons who suffer from inebriety.

First, no matter what the real cause may be, we must recognize the presence of alcohol and remove it; for the practical fact is, that the use of this drug in toxic doses, or continuously, causes tissue degeneration and starvation, and this interferes with the process of absorption and elimination, thus breaking up all chemical changes in the body. This may go on for a long time and without marked evidence of the real condition. If the patient cannot be treated at home successfully, he must be removed to some asylum or hospital, or properly quarantined, until positive seclusion from this cause can be obtained. Alcohol always masks and covers the real condition of the patient, and its redrawing reveals the long train of causes that enter into the formation of the case, permitting more exact studies into the nature of the disorder. No case can be treated unless absolutely removed from alcohol. This can be most effectually done in a special hospital for this purpose, where legal restraint can be combined with surroundings to make it difficult to procure spirits. After the removal of alcohol, the sanitary surroundings of the patient demand attention. From whatever circle of life or social condition he may come, there will be found a general neglect of healthy habits of living and exercise. All regularity of work and proper care of the body is essential for the healthy activity of both mind and body. If this cannot be done elsewhere it must be in special hospitals, conducted in the most methodical and hygienic manner. Not only the location, but the building, must afford every facility to bring the best conditions of health. It may be large or small, situated either in the country or

suburbs of city, but it must combine seclusion from alcohol and the best sanitary conditions for restoration. Residence in such a place must be positive and exact, and not depend on the feeble will and impulse of the patient. The duration of this residence should depend on circumstances and the history of the case. The legal principle which should apply in these cases is that whenever any person by the excessive use of alcohol, not only injures himself, destroying his property, but perils the rights of others, and the good order and harmony of society; he should be restrained and forced to adopt such measures as will lead to a speedy recovery. He is for the time substantially irresponsible and incapable of exercising full liberty of choice, and should be treated the same as a case of smallpox, or a suicidal mania. If he will not go voluntarily into the special surroundings necessary for health, it is the duty of his friends and society to force him to do so. The question is not of the degree of responsibility, or capacity for self-restraint, or of the moral state of the patient's mind; but the immediate means to meet the demands of the case. On the same principle that the surgeon when called to treat a fracture having first ascertained the kind of injury, uses the exact appliances to meet the case without regard to other causes which may have been present. In special hospitals the study of inebriety can be conducted with much accuracy, and all the many symptoms which distinguish it as a disease can be pointed out, and their proper treatment more positively ascertained. The application of the principle of rest in the treatment so essential, can be more thoroughly carried out here where all the surroundings are under the control of the physician. Nervous exhaustion is more or less present in all cases. The application of rest to both mind and body requires a nice adjustment of means and remedies based on an accurate study of the wants and history of the case. For instance, a patient accustomed to active brain labor, needs a different kind of rest from the gross, lethargic case that has but little mental exercise. The one gets rest from diversity, the other from quiet and regularity. The treatment by rest enters into all the conditions of functional and mental living. The inebriate hospital should be a rest cure in its broadest scientific sense. Turkish and electric baths are undoubtedly the most valuable medical means to rouse up the diseased organism; they seem to have a marked power over the vaso-motor paralysis, and increase the eliminating process of the skin, etc. Electricity and bitter barks, also arsenic and strychnia, are of great value in certain cases, while the bromide chloral and other depressants should be given guardedly, and not without positive indications of their necessity. The common practice of treating patients at home by such chemical restraints as may be obtained from chloral, bromides, opium and other drugs of this class is dangerous and always prolongs the duration of the disease, increasing the organic degeneration, and making recovery more difficult. In two cases which came under my care, one for chloral and the other

opium inebriety, the origin was evidently from the use of these drugs to relieve the effects of excess in the use of alcohol. The use of such narcotic drugs in inebriety should be contra-indicated, as a rule, from the natural tendency of this disorder to merge into diseased cravings for these substances. A physician, whose son had been under treatment at Binghampton Asylum for dipsomania, and had relapsed after being discharged, commenced active treatment by chemical restraint at home when the attack came on. By profoundly narcotizing the patient on the appearance of the attack, and keeping it up until the paroxysm was over, he was prevented from using alcohol. The physician was delighted and rushed into print in an article to show that inebriety could be successfully treated at home by these agents. Two years after his son was sent to an insane asylum demented and idiotic, and the history indicated clearly that bromide of potassium and chloral were the active causes.

The inebriate, though appearing to be in possession of a sound mind, will always be found on the other side of that mysterious border-line of mental health. The ego is always very active, and delusions of strength and capacity to endure and recover are present to the last moment of existence.

The inebriate, in the lowest chronic stages with the adverse experience of twenty years, will talk and act confident in his ability to stop the use of alcohol absolutely at his pleasure. Alcohol seems to act on some cerebral centers of the brain, causing what is variously termed moral paralysis and degeneration. Marked first by false reasoning on matters of right and wrong, and timidity of character. Then a general progressive degeneration of all the higher elements of manhood, also confused efforts to conceal his motives and character behind a mask of deception and intrigue. Prevarication, want of veracity, slandering, and decline of pride with impulsive selfishness alternating with unbounded benevolence, may be noticed in every case. These mental symptoms rarely attract attention until the case has become chronic, and even then are observed only by his most intimate friends. In all these cases the mind needs treatment as well as the body. An asylum that will provide immunity from alcohol with good surroundings and rest, must bring mental appliances that will reach these obscure physical conditions. Of these restraint is important, not the bars of a prison or the control of an insane asylum, but the combination of the two applied at times with military exactness, and alternated with freedom. Each case should be governed by conditions and circumstances which depend on the history and causes. Often restraint is injurious and the direct cause of mental irritation that may bring on a relapse; again it is a powerful stimulus rousing up the feeble will and debilitated organism into a healthy activity. It may be termed either an irritating depressant or a stimulating tonic and its proper application of this means is a valuable remedy.

Continuous restraint and unlimited freedom are both contra-indicated from a clinical study and the wise application of each is found to be absolutely essential in the treatment of such cases. This is a means of treatment which should be used with the same discretion and judgment as medicines. In the practical application of the treatment of these cases in an asylum, three distinct classes will be found.

The first class is probably most prominent of all others, and are found to be mentally defective by inheritance. They have an exceedingly low sense of duty and conceptions of right and wrong. Very frequently they display distinct criminal tendencies, associated with weak will and low passionate impulses. As inebriates they need sharp active discipline and exact military surroundings, regulating every duty and act of life. This, continued for a long time in an asylum with medical treatment, gives much promise of permanent cure. After two or more years in an asylum, if they can be placed in some position removed from all general temptation, and actively employed for a long time, their restoration is assured.

For a long time these cases have been regarded as types of all inebriates, when, literally, they are simply strongly marked cases of defective brain and nerve force, alternately criminals, insane and inebriates, from accident and circumstance. They are freighted with a peculiar diathesis, which breaks out into either criminality, insanity, inebriety or trampism, or one or more together, depending upon circumstances, and are always more or less incurable. Superintendents of insane asylums and judges have based their conclusions of inebriety from observations of this class. In the insane asylums they are the most troublesome of all cases. In the courts they are the repeaters that are sent to jail regularly for intoxication; and in all circles they are the pests of society, continually drinking, committing petty crime and outraging society by all kinds of excess. In inebriate asylums they abuse all the privileges and bring every effort to help them into discredit. Injuring the other patients and continually keeping up an atmosphere of insubordination and irregularity. When discharged, are full of slanderous stories about the asylum, and stand around the corners of streets advertising the failure of the institution to effect a cure in themselves.

This class of inebriates is universally misunderstood, and never studied clinically; yet they will be found to have a distinct cause, development, symptomatology and termination. Nothing is more erroneous than the very common expression of the incurability of inebriety, based on empiric efforts to cure the criminal or insane inebriate by means that are not only inadequate, but unfounded on any knowledge of the nature of the disorder. Deductions as to what inebriety is, and how it may be treated, founded on a limited observation of such cases, which are always exaggerated types, are grave errors.

The second class of inebriates who come for treatment are less prom-

inent and are the victims of circumstances, and some accidental causes not understood. They come from the middle classes and represent the hard-working, active brain-labor of the country. Heredity is always more or less obscure, and usually the history of nervous and constitutional disease is not in the direct line of inebriety, but in some collateral branch. They are particularly noticeable from the prominence of delusions of strength to stop all use of spirits at their pleasure. But they never do, notwithstanding all their past failures, insist with earnestness that they have the full power and capacity to recover. In these cases there are general conditions of ill-health present, such as general exhaustion, anemia, neuralgia, and functional disorder of the heart and stomach. Injuries of the brain and spinal cord, profound shocks from both mental and physical causes, sunstroke and exhausting diseases can be often traced as the active causes in many cases. This class will be found to represent an average physical and mental capacity, with, not unfrequently, great activity and ambition to attain either wealth or distinction in life. From various circumstances, depending on ill-health, irregularities of living, bad surroundings, overwork, mental worry, and many other causes, the use of alcohol commences as a temporary relief and culminates in a toxic condition of intoxication. From this time pathological changes begin, and alcohol is demanded ever after. After a period of constant use of alcohol, they frequently merge into periodical inebriates, with a free interval of more or less uncertain length. Many of these persons are strong temperance workers in the free intervals, and appear to be in good health and in full possession of their will power. To their friends they are enigmas and seem to be under control of an evil spirit, and are never able to understand why or when they will drink. These are literally very hopeful cases, even in the chronic stages, and when they remain a long time in the asylum recover. I think that a very large per cent. of these cases can be permanently cured. They need, most of all things, seclusion from alcohol and physical rest, also change of life and activities, with long-continued hygienic and medical treatment to build up the system. These are the cases which get well all unexpectedly; from no special means other than the will to do so. They are often the shining examples of prayer meetings and temperance societies, and seem to relapse and recover in the most mysterious, uncertain manner. In the asylum, in the treatment of these cases, great care is necessary in the matter of restraint and effort to keep the mind occupied all the time. Each case demands special conditions and methods of treatment, which shall educate the patient's mind and teach him to observe the utmost regularity in all habits and duties of life. After treatment in an asylum, such cases need a change of labor and living, also freedom from excitement or long-continued exhausting work. If the mind can be kept active and buoyant, the vigor of the body is sustained. Such

cases cannot be treated at home, under any circumstances, but must have both change of life and surroundings.

A third class of inebriates differing from both of the others mentioned and equally prominent are always seen in the asylum. They are noted for the exhibitions of great extremes of strength and weakness. The patient will stop the use of alcohol at home suddenly and under the most diverse conditions come to the asylum, either alone or with his friends, and give strong evidence of great earnestness and honesty of purpose. On the way to the asylum he will pass through great temptations and never touch spirits; but in one hour after arrival, he will plan and execute the most cunning schemes to get spirits. He will exhibit at times a kind of a malicious mania for alcohol, and then be bowed down with the greatest contrition and sorrow and do all that is possible to repair the injury. Unlike the class last mentioned, there will be found a certain method in both his relapses and recoveries, that to many seem exceedingly suspicious. This class always inherit an uncertain nerve and brain condition from intellectual hard brain workers. Politicians, lawyers, editors, brokers, railroad men and over-worked clergymen contribute the largest number of descendants to this class. They usually possess a degree of talent that borders on genius or madness, and seem to have no fixed purpose in anything. They often come from wealthy, luxurious surroundings, suffering in childhood from bad food and no training and general imperfect physical growth, nervous excitement in early life, wine on the table, surfeit of food and many other causes which break up natural healthy growth. I have traced the early causes of many of these cases to nervous shock and exhaustion at puberty from the first sexual act. A condition of feeble reaction from any kind of exhaustion is always present, and wine and spirits are used to counteract this effect. They are always filled with the delusion that the moderate use of alcohol is a normal, healthy state and all their ideals of life center on this condition. In the early stages they are constant drinkers, but later when they are debilitated, are impulsive, irregular inebriates. In some cases a wonderful power of self-control is seen, which seems to be of the nature of paralysis, by which the patient will unexpectedly stop all use of alcohol and go about in the worst conditions of temptations for a long time; and the only explanation which he gives is, that he has made up his mind to drink no more. A remarkable example of this was seen in the history of Judge Raymond. When thirty he was a confirmed inebriate, and given up by his friends. All unexpectedly he resolved not to use alcohol again until he was seventy years old. From this time on he was a strict temperance man, and finally became a judge, and he was a very eminent and exemplary man. On the morning of his seventieth birthday he became very much intoxicated, and died two years later of delirium tremens, having drank in the meantime almost constantly. These cases are frequently marked in the later stages by delusions of

suspicious of injustice from their nearest friends. Extreme degrees of mental and physical exhaustion characterize the case in its later stage. In treatment, the necessity for absolute quiet and rest, with extreme regularity of surroundings and varied restraint are apparent. This class are for a long time irritable and fault-finding, but seldom are unmanageable. They enter heartily into all plans of treatment for themselves, and although they will sympathize with and plan to get alcohol for the newly arrived patient, yet never touch any themselves. They are often very emotional and deeply religious, and recover readily in ordinary asylum treatment, but seem to be influenced by circumstances and health more than the other classes. Their ultimate recovery depends on complex conditions, which are largely unknown, and are always questions which the intimate study of each case will determine. In this class I have seen less complicating diseases, and been able to trace a range of connected symptoms from the beginning to the end in many instances. The study and successful treatment of these cases can only be assured in well ordered asylums. In this very general description of three classes of inebriates, which appear in every study of this subject, the varied complexity of the causes requiring special means are apparent. No question of treatment or means to lessen the number of inebriates can be determined, except from a clinical study. Inebriety is curable to a large degree, and if taken in the early stages recovery would be the rule, and failure the exception. Even now many chronic cases, under diverse circumstances, recover permanently, and nearly all are largely benefited by asylum restraint and medical care. Inebriety will be no mystery when we shall understand its nature and causes, and its treatment will be no doubtful matter when we can classify and treat each case according to its special demands. We have indicated that inebriety can be reached most successfully:

1. By isolating the patient in a special home or hospital, where all his surroundings can be under the care and control of a physician.
2. Here a special study of the case will reveal the minute chain of causes which have increased or directly brought on the disorder.
3. From this study will be marked out the particular treatment essential to the cure in each case. The second general fact covers all those preventive measures and hygienic means that will lessen the numbers of persons who suffer from inebriety.

CLINICAL REPORT.

A CASE OF RAYNAUD'S DISEASE TREATED BY THE RUBBER TOURNIQUET.

By SIDNEY I. SCHWAB, M. D., of St. Louis.

In the November number of the *Journal of Nervous and Mental Disease* appeared a paper by Cushing, of Baltimore, on the treatment of the vaso-motor spasm in Raynaud's disease, by means of a rubber bandage applied above the region of vaso-motor spasm in the extremity affected. This method was based upon the assumption that there was in the disease a physiological overaction of the neuro-vascular apparatus. The active hyperæmia, with increased surface temperature, presumably is due to the temporary paralysis of vaso-motor control below the encircling bandage. The experience derived from the application of such bandages in surgical practice seemed to justify, on theoretical grounds at any rate, the use of the same procedure in this class of cases. The therapeutic result in the case of Cushing's was so pronounced that there could be no question of the correctness of the procedure. The following case is an illustration of the efficacy of this method of treatment:

Case.—Mrs. M., forty-eight years old, was sent to me by a dermatologist of this city to corroborate the diagnosis of Raynaud's disease which he had made in the case. This was the patient's first attack which had lasted with intermissions for about six months. About that time she noticed that the first finger of the right hand became white, then blue and cold. There was a good deal of pain in the fingers during the attacks. For the pain the patient could find no relief. Soon after ulcerations appeared at the terminals of the first two fingers. These showed very little tendency to heal at first though they did so finally without leaving any deformities. Shortly afterwards the fingers of the left hand underwent the same changes. The condition presented at the first examination was that of a typical Raynaud's. The terminal phalanges of the first and index fingers of the left hand were the seat of painful ulcerations with gangrenous edges. The nails were apparently undergoing trophic changes. They lay very loosely in the matrices. The pain was almost constant and severe. The other fingers of this hand were cyanosed and cold to the touch. The pain radiated up the arm and was neuralgic in type and more severe on the extensor surface. Physical examination was absolutely negative except for the changes just described. There was nothing in the past history of the patient which threw any light upon the present condition. There was no family his-

tory of any similar affection. The urine was normal, with a specific gravity of 1034.

A rubber bandage three inches wide was directed to be applied three times a day above the area of vaso-motor spasm. The bandage was left in position about ten minutes. In addition adrenalin was given on the chance that there might be a lowered arterial tension that would be a factor in the vaso-motor disturbance. In Cushing's case there was found no rise of arterial tension during the application of the bandage. It is very probable that this factor plays no important role in the disease. The relief from pain was almost instantaneous, and in a few days the gangrenous extremities of the fingers began to disappear. Two months after the treatment was begun the fingers were altogether healed, the pain had disappeared and the condition of the patient had improved in every way. The fingers then presented no deformity or scars. They still, however, felt damp to the touch and became bluish in color, on a dependent position. The result in this case then shows the same relief of symptoms as in the case of Cushing's and though in this case and in his the Raynaud's is not cured, yet there is at hand by the method here described a ready means of relief of the most annoying symptoms of the disease.

EDITORIAL COMMENT.

THE NECESSITY OF NEW LUNACY LEGISLATION.

In the last number of the *American Journal of Insanity* there is a description of a case of unusual interest in which the medico-legal aspect is clearly brought out by the author, Henry R. Stedman, of Boston. In consequence of the discussion of this case the Boston Society of Psychiatry and Neurology appointed a committee to offer to the legislature of the state this new statute. It was speedily passed. It is as follows: "If a person under indictment for any crime is, at the time appointed for trial, or at any time prior thereto, found by the court to be insane, or is found by two experts in insanity, designated by the court, to be in such mental condition that his committal to an insane hospital is necessary or for the proper observation of such person, pending the determination of his insanity, the court may cause him to be committed to a state insane hospital for such time and under such limitations as the court may order." This represents an advance in criminal procedure which other less fortunate communities may well envy. The state of things in this community, not only in relation to the criminal side, but in that of insanity in general, may be considered with the purpose of bringing before the readers of this journal where the reforms are most needed. In this city and in this state there is no lunacy commission and no body which, by selection or intent, performs its function. There is no state or city control of private institutions for the treatment of the insane, and there is no record of how this trust is administered. There are three ways of commitment to an insane hospital in this state, all of which are antiquated and likely to be abused. First, unsoundness of mind can be established before the probate court as the result of the testimony of one physician, who may or may not be one whose opinion has any particular weight on the subject of insanity. Most often he is the family physician. The jury before whom the testimony is given is rather less intelligent than the usual criminal juries, and receives with reverence the verdict of an expert in a recent case, given with ponderous gravity as follows: "The patient is, in my judgment, mad with insanity." A verdict of insanity thus given establishes the patient's unsoundness of mind, and, if poor, he goes to the city asylum. Second, through observation at the city hospital for a certain period of time. The opinion in this instance is in no sense expert, and is generally not even well informed. It is to be observed here that there is no regular visiting alienist or neurologist, through whom intelligent observation of doubtful cases might be obtained. Third, commitment to private institutions in

or near the city can be brought about with even less ceremony. A purely formal letter of the physician is all that is necessary, and even that in certain cases is not essential. For expert opinion in medico-legal cases there is absolutely no provision. A paranoïa may be tried, convicted and executed for murder, for instance, and no question as to his sanity be raised except upon the instance of his attorney, if he desires to make the usual plea in extenuation. A criminal thus condemned remains in jail, and if there is any examination made at all it is purely perfunctory, and of all places in the world a jail is the worst possible one in which to observe an individual with such a question at issue. This statement of well-known facts is sufficient to show the utter antiquity and the possible injustice and cruelty of such a system.

INTERNATIONAL CONGRESS OF ARTS AND SCIENCE—UNIVERSAL
EXPOSITION, ST. LOUIS, SEPTEMBER 19-25, 1904.

When a World's Fair is over, when the lights are turned out on the last night never to be relighted, when the beautiful architectural creations are pulled down, one naturally asks with a tinge of sadness, What has it all amounted to? Of course, there has been a temporary commercial advantage gained and many people have had a good time, but what of permanent good has all the trouble and energy expended produced?

These questions have naturally arisen in the minds of thinkers since the exposition idea began to develop, and as an answer to them we now have placed before us a plan for holding a congress of men of science and letters which is almost as stupendous as the conception of a universal exposition itself.

The central purpose of this congress is the unification of knowledge. To accomplish this men of prominence throughout the world are to be brought together under one roof, as it were, and are to give their fundamental conceptions and methods and set forth the progress made in the last century. When we stop to consider the breadth of science and the almost infinite division of the whole into special fields of research, we almost breathlessly ask how the thing may be accomplished. It is all arranged, however, and the scheme is simplicity itself. In the first place, the whole field is divided into seven grand divisions, these seven are subdivided into twenty-four departments, and these twenty-four are again subdivided into one hundred and twenty-eight sections. Let us explain the workings of this plan by taking that department of science which more directly interests us—*i. e.*, medicine, and using this as a guide the simplicity will become evident.

Division E constitutes the "Utilitarian Sciences" and includes Medicine, Technology and Economics. Medicine, which is the first of these, is called *Department 17*. The chairman of this department is Dr. Wil-

liam Osler, and the speakers are William T. Councilman and Frank Billings. Department 17 is divided into twelve sections, each section has a chairman and two speakers. For instance, section 10, Preventive Medicine, has for speakers Professor Ronald Ross, F. R. S., School of Tropical Medicine University College, Liverpool, and Professor Angelo Celli, University of Rome. To go through the several special departments of medicine given and to name the speakers and chairmen would only be to call the role of men who stand first in their work.

How are these men to be heard? The congress opens on Monday afternoon, September 19th. The next morning at the places decided upon addresses will be given in the seven main divisions. Breaking up then into departments, two addresses will be given to each of the twenty-four departments. On the third day the work in sections will begin and about 128 sectional meetings will be held each day for the remaining four days of the congress. Religion, law, chemistry, politics, etc., etc.; in fact, all knowledge will be thoroughly discussed, and the addresses and discussions are to be collected and published in special volumes.

The transient joys of a "midway" or of a "pike," the specially designed sensations of a "Ferris wheel" or a "scenic railway," to say nothing of those stimulated in certain "oriental streets" do not make up everything that a great exposition may hand along to memory. The work has all been done for us and we, as physicians, who should be investigators and scholars, ought to take up the advantage and derive all the profit and inspiration that such a grand general survey of the fields of learning must of necessity give.

MEETING OF THE AMERICAN NEUROLOGICAL ASSOCIATION.

The American Neurological Association meets in St. Louis on Thursday, Friday and Saturday, September 15, 16 and 17, 1904. The sessions will be held in the ladies' parlor of the Planters' Hotel. The indications are that there will be a good attendance of the members. The program is very attractive, including titles from some of the most distinguished neurologists in the country. The profession is cordially invited to attend.

On Saturday evening, the 17th, the St. Louis Medical Society of Missouri, at its regular meeting place in the Board of Education building, will present a special program in which the leading features will be contributed by gentlemen eminent in neurological circles. This promises to be an enjoyable meeting and there will probably be a large attendance.

HUMAN AND BOVINE TUBERCULOSIS.

The intense excitement that has reigned during the last year in the discussions on certain conceptions of tuberculosis, has gradually subsided and given place to a more sober and quiet consideration and investigation of the factors concerned. This obtains especially in the discussion of Koch's thesis of the difference between human and bovine tuberculosis.

Up to one year ago from the study of the literature the reader was liable and almost bound to conclude that this thesis had finally received its death blow, but slowly and with convincing strength its truth has been revealed. In almost all hostile quarters there is observed a gradual withdrawal of general denials. The transmission of the one causative agent to the host of the other is more and more acknowledged to be the exception. Although the investigations of Kossel and others have been twisted and meddled with until they appeared to demonstrate the opposite of what they intended to show, their innate truth has forced itself at the present fully on the mind of many critics. The conception itself that was given to Koch's thesis and its meaning, was in many ways unclear and misunderstood. The discussion about the identity of the bacilli could never have arisen if Koch had not been dealt with as a tiro in the study of pathogenic organisms, instead of as the master whose knowledge is taken by all who really know his work, as based on the most thorough investigations and studies ever made in these branches of science. There is no doubt that bovine tuberculosis can be transmitted to man, and *vice versa*, and Koch has never denied this possibility; all he wanted to do was to establish the rarity of this occurrence, and with all his weight and authority to lay stress on the fight against the human bacillus.

That theoretically Koch's opinion is correct is proven by the work of his direct antagonist in this question, by Behring, through the successful immunization of cattle by means of human bacilli. Koch never said that the two bacilli were not identical; he, their discoverer, could not say it, but his researches had shown him that between the two there existed some of those biologic differences that we may call racial, or functional, or whatsoever, that in the sense of natural and general biologic science do not constitute a reason to separate two otherwise identical organisms into different species or subspecies, etc. What Koch intended to impress for tubercle bacilli, was something that was a long since entertained general conception for many other bacteria and other microbes (anthrax, vaccinia, &c). That Koch is correct and that in many respects the two forms of bacilli behave differently, nowadays everybody admits. The conclusions he has drawn from these facts, as well as an astoundingly comprehensive, extensive and valuable account of clinical and other

factors, cannot be done away with by single isolated experiments and observations.

In this connection a late communication from Japan is of the utmost value and convincingly demonstrative, in which Kanda and Shiga discuss the origin of bovine tuberculosis and human tuberculosis in their country. Japan, before her contact with European nations, had the average rate of tuberculosis in its population that other nations have; bovine tuberculosis was unknown. Up to thirty years ago very few cattle were raised in Japan and the use of cow's milk and of beef did not exist. With the introduction of American cattle the bovine disease and the use of bovine products became disseminated, but the rate of human tuberculosis remained the same. It is to be noted also, that even today in Japan cow's milk is only in exceptional cases used for feeding infants, but that the rate of tuberculosis in children is nevertheless rather higher there than in many European countries. A better proof of the little influence that bovine tuberculosis has on the percentage of human tuberculosis cannot be found.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

A New Principle for the Determination of the Boundaries of the Stomach.—NEWMAN (*Wiener Klinische Wochenschrift*, No. 24, 1904), describes a method which he considers a new and simple procedure for determining the size and position of the stomach.

A Pollitzer bag is attached to the stomach, as is ordinarily done in inflation of the stomach; air is slowly pumped into the stomach and the sounds thus produced are noted with a stethoscope. As the air rushes into the stomach a very characteristic sound is produced and is heard distinctly over the stomach only. By moving the stethoscope from point to point while pumping air into the stomach, the exact outline of the stomach may be noted. The advantage claimed for this method is that the boundaries of the stomach may be determined without distending it greatly.

The Influence of Endofaradization and Endogalvanization of the Stomach on Secretion Motility and Sensation.—BORRI (*Berliner Klinische Wochenschrift*, No. 26, 1904), reviews the literature on intragastric galvanization and faradization and its effects, and adds the results of his own observations carefully carried out on a series of cases. He finds that neither of the currents is of any therapeutic value so far as secretion and motility are concerned. The results are quite remarkable, however, as to sensibility when the galvanic current is employed.

The Serum Treatment of Acute and Chronic Articular Rheumatism.—MENZER (*Muenchener Medicinische Wochenschrift*, August 16, 1904), basing his conclusions upon a series of personal observations, states that it is possible to cure or improve the condition of cases of chronic articular rheumatism by means of the serum.

Acute articular rheumatism is greatly benefited thereby, and the chances for the cure of endocarditis are greatly improved.

It seems to have a great advantage over the other methods of treatment, in that the tendency to relapse is decidedly lessened. The application of the serum often causes chronic inflammatory lesions to undergo acute inflammatory changes. It is possible, therefore, in pericarditis and pleuritis with effusion to produce serious complications through increasing the inflammatory process. The same would be true in a case of valvular stenosis, due to chronic endocarditis.

Inasmuch as the serum causes febrile reaction, it is not well to employ it in the very weak, emaciated cases of chronic articular rheumatism.

The Significance of Leucocytosis in the Diagnosis of Purulent Conditions Within the Abdomen.—TURKEL (*Centralblatt fuer die Grenzgebiete der Medizin und Chirurgie*, August 5, 1904), presents a most thorough review of all the literature up to date on the above subject. He has collected and tabulated some seventy literature references.

While he attributes to leucocytosis a diagnostic significance, he lays great stress upon the care with which the determination is made and the conditions. Concurrent causes of leucocytosis must be excluded.

Repeated counts should be made in every case.

Only the large leucocyte counts (20 to 25000) should indicate involvement of the peritoneum. The negative findings have little or no significance.

Disinfection of the Bile-Ducts and Internal Antisepsis.—KUNN (*Muenchener Medicinische Wochenschrift*, August 16, 1904), endeavors to determine through a series of formulation tests what drugs are excreted in the bile, and in what form they are excreted. There have been isolated from the bile, bilirubin, urobilin, acid salts, hemaglobin, arsenic, iron, mercury, fuchsin, turpentine, salicylic acid, sodium salicylate, iodide of potassium, bromide of potassium, ichthyol, formaldehyde, etc., sublimate, carbolic acid, etc., cannot be considered in connection with the biliary ducts because of their great toxicity.

Others cannot be used because they are not excreted in the bile, or are excreted in some form which is inert. Naphthol and methylene blue, for instance, are excreted in such small quantities, and in such a form, as to be inactive. Saccharin and ichthyol pass through in small quantities, but have been found practically useless in this connection.

Thymol, menthol and the salicyl group seem to offer the greatest possibilities. Salicylic acid and its salts were found to exert a marked influence over the fermentation of the bile and are, therefore, the best drugs for internal use in inflammatory processes in the biliary ducts.

Acute Cholecystitis Simulating Appendicitis—Two Illustrative Cases.—CHUTE (*Medical Record*, August 13, 1904).—There is not infrequently a great similarity between the picture of acute cholecystitis and that of acute appendicitis. It is much more common for acute cholecystitis to be mistaken for appendicitis than the reverse. The correct diagnosis can usually be made by careful palpation after the patient is etherized. In a few cases the correct diagnosis cannot be made before the abdomen is opened; this occurs most often in the cases in which there is an appendix abscess in the region of the liver, or an inflamed adherent gall-bladder in the appendix region. An additional complication in the diagnosis of these cases is the fact that both cholecystitis and appendicitis, may occasionally occur at the same time. Cases have been reported in which both diseases were in an acute stage; this is very unusual. The combination of an acute cholecystitis with a chronic appendicitis is not very uncommon; the reversed condition has been reported less frequently. In dealing with supposed cases of either of those two most common intra-abdominal inflammations, one should always bear in mind the closeness with which they may simulate each other. When at operation the state of the organ investigated does not satisfactorily account

for the patient's condition, the other organ should always be examined. The author lays great stress upon distention of the abdomen and a disproportionately slow pulse, as pointing to gall-bladder involvement, rather than appendicitis. He reports two cases in which the symptoms pointed closely to appendicitis and in both cholecystitis, with cholelithiasis was found.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

The Treatment of Excessively Large Herniæ.—MADELUNG (*Archiv. fuer Klinische Chirurgie*. Bd. lxxiv. Hft. 1).—The class of herniæ to which reference is made includes those which cannot be replaced by operation or otherwise, and those alone. This is not due to size alone, but to adhesions and other factors as well. Not infrequently these lesions are seen following "radical" operations which failed to cure, and then the condition is as bad as can be imagined. It is easy to relieve one of these patients when the functions of the intestine are not disturbed, by simply applying a suspensory which will relieve him of the extra weight in the scrotum. Urination is greatly helped by inserting a tube into the depression, which usually leads up to the retracted head of the penis, and especial arrangements often can be made for defecation, whereby the skin of the scrotum may not be soiled. Spontaneous rupture of the scrotum, with consequent peritonitis is to be feared, as is ileus of one sort or another and gangrene of the intestine. And these occur much more frequently than one is commonly lead to suppose. If an operation is attempted it is well to keep the patient in bed for weeks beforehand, with the pelvis elevated and to try to reduce the amount of fat present. However, it may come to extensive gut or omental resection, while a possibility in the way of increasing the capacity of the abdomen would be to create a diaphragmatic hernia. The author has found that an artificial intestinal fistula is efficacious in relieving ileus, where no more radical operation is to be thought of.

Buried Metallic Ligatures and Sutures.—JEANNEL (*Archives Provinciales de Chirurgie*. Tome 13, No. 7).—This novel article deals in an exhaustive manner with a subject which has almost escaped the attention of latter-day surgeons. At the outset our author deals with the difficulties which accompany the use of sutures of the ordinary varieties, breakage, length of time wasted, difficulties of accomplishing and maintaining asepsis, etc. He then takes up the question of trouble which might arise from leaving metal sutures and ligatures lying permanently in a wound, but demonstrates by his own extensive experience that this may be safely done. These little clips are made of nickel and can be applied with an instrument about as fast as bleeding points can be clamped. Almost any vessel, whether isolated or not, seems to be amenable to this sort of treatment. M. Jeannel has done 103 operations while using metal liga-

tures alone, with the highest degree of success; these comprising almost everything in the range of surgery. He has seen the clasps extruded in but nine cases, and in every one of these there was an infection which accounted for the accident. He is more than delighted with the results obtained, and considers this question settled as far as it can be until such a clasp as he describes has been made of absorbable metal.

The Surgery of the Biliary Tract.—RICHARDSON (*Journal of the American Medical Association*, September 3, 1904).—The author's prominent connection with the work and literature of this subject makes an article from his pen a matter of more than usual interest. The most important one thing to be considered in the treatment of all affections of the biliary passages and the gall-bladder is drainage. But fistulæ and herniæ must not be left behind in order to accomplish drainage; how to secure the desirable end mentioned without exposing the patient to the danger of the other two, may be said to be the subject of Richardson's paper. At the same time he mentions some interesting cases in which he discovered stones during the progress of other abdominal operations, and he deals with the subject of removing stones which cause no symptoms as yet. The author's view seems to be that all stones which are known to exist should be removed before they cause trouble, for then an element of uncertainty is removed; the operation is not dangerous, and no one can tell what may happen if they are left alone. Drainage is necessary in almost all cases, and a recurrence of stone formation after this has been properly accomplished, is almost unknown. Richardson is not enthusiastic over the removal of the gall-bladder as a routine practice; in fact, he goes farther in limiting the indications for this procedure than do most modern surgeons of his experience. Hernia in the scar is to be prevented by some form of muscle splitting operation, while a permanent fistula means blocking of the common duct, usually by a stone.

The Technique of Nephropexy.—HOFMANN (*Beiträge zur Klinische Chirurgie*, Band xlii, Heft 3).—The fact that there are so many different varieties of operation proposed for the relief of this condition is proof positive that none of them are of surpassing merit, hence the author feels at liberty to propose one more. His idea, which is a most simple one, and, to say the least, founded upon good mechanical principles, is as follows: He turns back the fatty capsule, then brings the kidney as high as possible in front of the last rib; having ascertained the best point of contact between these last named structures, he treats the tunica propria in the following way: On the posterior surface of the organ an "H" shaped incision of the capsule is made, with the connecting bar extending longitudinal to the organ. The two little flaps thus formed are each rolled away from the other as far as possible, then through the little rolls thus formed two heavy silk threads are sewn and each tied finally around the last rib, the organ thus being drawn into good position and securely held there.

The Therapeutic Value of "Hepatic Drainage" After the Method of Kehr.—DELAGENIERE (*Bulletins et Memoires de la Societe de Chirurgie de Paris*, Tome xxx, No. 26).—The author is decidedly in favor of this procedure

of inserting a tube into the hepatic duct after certain operations upon the passages. His observations have led him to the following conclusions, viz., that the hepatic duct is always dilated whenever there is enough retention due to a stone's presence to cause enlargement of the liver. Then it can be said that hepatic drainage is indicated whenever the duct is dilated. A successful case is detailed, in which that method was employed. In his concluding remarks the author calls attention to the fact that it is always easiest to drain the duct in just those cases in which it is indicated. The efficiency of such drainage is best attested by the fact that no bile stains the stools where it is employed.

Peptic Ulcer of the Jejunum.—ROBSON (*Annals of Surgery*, August, 1904).—Communications from the pen of this distinguished abdominal surgeon are always read with interest; especially must this be true in the present instance, since he deals with a subject which is so rare that but sixteen instances of its kind have been recorded, this being the first one in Great Britain. Peptic ulcer may follow gastro-enterostomy, much less frequently after the posterior opening has been made, however. It has never been known to follow a pyloroplasty of the older type, though as much has not yet been proven for the Finney operation. In the sixteen cases which Robson found in the literature, an anterior operation had been performed in thirteen, a posterior operation in two and the "Y" operation in one. Certainly a strong point in favor of the posterior procedure as a routine practice.

The author reports a case in which this complication occurred nearly three and one-half years after an anterior operation; a resection was then made and the patient recovered.

The Open Treatment of Wounds After Transplantation.—BRUENING (*Zentralblatt fuer Chirurgie*, No. 30, 1904).—The author is very much in favor of treating these cases without any sort of dressing where possible, that is by allowing the free contact of the air in order that the exudata may dry at once.

It made no difference in his experience whether the wound was a fresh or a granulating one. Especially is it to be recommended where possible that the patient be allowed to lie on the operating table for a few hours after the transplantation without any sort of wound covering in order that the graft may become glued to its new bed. It may be necessary to apply some sort of protection at night if there is a tendency for the patient to injure the wound unconsciously by scratching or changing the position. In a week all grafts have healed on if they are ever going to do so. By this new treatment the old tendency to accumulation of exudata and masceration of grafts is counteracted.

THERAPEUTICS.

IN CHARGE OF

ALBERT E. TAÜSSIG, M. D.

Rodagen in the Treatment of Graves' Disease.—WILLY KUHNEMANN (*Muench. med. Wochenschr.*, 1904, No. 10).—Rodagen, which has several times been referred to in these columns, is a preparation obtained from the milk of goats that have been deprived of their thyroid glands. In a case of exophthalmic goitre affecting a woman nineteen years old, Kuhnemann obtained an astonishingly good result by the administration of this drug. Beginning with the 1st of October the patient received 2 grams of rodagen three times daily. The first effect was an immediate gain in weight. On October 6th she weighed 97 pounds; on the 10th, 98 pounds; on the 17th, 101 pounds, and on November 7th, 109 pounds. The thyroid, too, became smaller. At the beginning of the treatment the circumference of the neck measured 35½ cm., on November 3d only 34 cm. The cardiac palpitation and the exophthalmus decreased markedly. She slept much better, and had lost all trace of tremor. In short, all the cardinal symptoms of the disease (tachycardia, struma, exophthalmus, tremor) had shown marked improvement as the result of five or six weeks' treatment with rodagen. In addition, the usual therapeutic procedures (cold sponges, vigorous feeding, cold applications to the precordial region, rest, arsenic in the form of injections of a 10 per cent. solution of sodium cacodylate) had not been neglected. In order to ascertain what share in the patient's improvement was to be ascribed to the rodagen, the latter was discontinued while the rest of the treatment remained unchanged. Within a few days the pulse again rose from 106 to 120, and the patient's weight fell from 109 to 106 pounds. Accordingly rodagen was again administered, with the result that a further improvement in the patient's condition took place, which continued until her discharge.

While a report like the above may well lead to further clinical trials of this very interesting preparation, in spite of the fact that in many cases of Graves' disease it has been found of absolutely no avail, it must not be forgotten that the psychical element may well have played an essential part in the patient's rapid improvement as well as in her decline when the drug was discontinued. Moreover, we are given no information regarding the permanence of the improvement. Further observation is needed before the value or the uselessness of rodagen can be regarded as positively determined.

Concerning Alcohol Poultices.—WOHL (*Deutsche med. Wochenschr.*, 1904, No. 7).—Since alcohol poultices have not yet come into general use, Wohl feels himself impelled to give some account of the favorable results he has obtained with them in the abortion of beginning suppuration. The action of alcohol, which penetrates into the deeper layers of the skin, depends on an irritation of the tissues lying beneath the dressing, which results in a great local leucocytosis and hyperemia. Wohl

recommends the following procedure: Gauze soaked in 90 to 95 per cent. alcohol is applied to the area of inflammation and covered with a layer of waterproof tissue. It should be renewed at least every twenty-four hours, and in severe cases every twelve hours. Such dressings will abort a beginning suppurative process and, moreover, have a distinctly anodyne effect.

Additional Experiences in the Treatment of the Pernicious Anemias.—E. GRAWITZ (*Deutsche med. Wochenschr.*, 1904, Nos. 30 and 31).—The term "pernicious anemia" has long been used by clinicians in a very vague manner. One reason for this has been the relative infrequency of the disease; another has been the fact that many well-known pathological conditions (such as cancer, chronic suppuration and malaria) may produce histological changes in the blood identical with those caused by the anemias without demonstrable organic lesion or parasitic infection, which have always formed the bulk of the conditions classed together as the pernicious anemias.

Instead of defining this condition from the etiological point of view, the tendency hitherto has been to consider it as a pathologic-anatomic entity, and to throw together into one group all the various conditions that may produce the same histological change in the blood. This tendency, the leading champion of which is Ehrlich, has not, however, resulted in a clarifying of our conception of pernicious anemia. The reason for this, Grawitz holds, is clear. It is just as wrong to throw into one group all the conditions that may produce the blood-picture of pernicious anemia as to group together all the causes of albuminuria. The only hope of further advance in our knowledge of pernicious anemia lies in grouping the various causes of this condition from the etiological point of view. The bulk of the cases will then be found to be due to a destruction of the red cells by means of a toxemia, and, while in a few of these cases the poisons responsible for the condition are introduced from without, in most of them they are of intestinal origin.

A prerequisite for the production of the disease, to be sure, is a congenital delicacy of the red corpuscles, so that a toxemia which perhaps would hardly injure the average individual, produces a profound destruction of erythrocytes. But, given this diminished power of resistance, the essential cause of the disease is intestinal auto-intoxication. If this be true, the usual treatment of pernicious anemia (iron, arsenic, nutritious food, etc.) must fail of its purpose—as indeed it usually does—and only a thoroughgoing attempt at comparative intestinal sterilization can hope to succeed. Grawitz illustrates his contention by means of a number of interesting cases related with some detail. They can here be summarized in only the briefest manner.

Case 1.—Woman, thirty-eight years old; presented the typical physical and hematological picture of pernicious anemia. In addition, she had gastric anacidity and extremely carious teeth. As the latter might be expected to have caused excessive intestinal putrefaction, she was taken entirely off of proteid diet, and given only vegetables in mushy form. The necessary albumen was given per rectum. No drugs were given. When she left the hospital ten weeks later she was entirely well

and her blood practically normal. She remained free from relapse until her death, in the following year, of acute pyelonephritis.

Case 2.—Man, forty-eight years old; entered the hospital delirious with retinal hemorrhage, albuminuria, indicanuria, gastric anaecidity, and the blood-picture of pernicious anemia. Daily gastric and colonic lavage, and the same diet as in Case 1, resulted in a rapid, complete and apparently permanent cure.

Bioferrin in the Anemia of Infants.—SIEGERT (*Muench. med. Wochenschr.*, July 5, 1904, p. 1,204).—It has been shown by Bunge that all infants, those at the breast as well as those fed artificially, must become anemic if, during the first year of their life, they receive in addition to their milk no substances richer in iron. This anemia is particularly marked in "bottle babies," and every case of rachitis is characterized by a very low per cent. of hemoglobin. The ordinary iron tonics are quite unsuited to this class of patients. Either they are offensive in taste and smell, or they are of a nature to upset the infant's digestion, or they contain harmful amounts of alcohol or ether. The hemoglobin preparations which avoid these disadvantages are always so rich in bacteria, for which they are an excellent culture medium, that they can not be considered harmless.

Prof. Cloetta, of Zurich, however, has (based upon extensive researches in the metabolism of iron) produced an organic iron compound which seems to have none of the above faults. It is free from ether and alcohol, not unpleasant to taste and smell, and practically sterile, only the hay-bacillus (*bacillus subtilis*) being found in pure culture. It is obtained from hemoglobin manipulated in such a way that it is believed the anti-bodies have not been destroyed. Kalle & Co., of Biebrich, have undertaken its manufacture and have put it upon the market under the name of "bioferrin." Prof. Siegert has used it upon a large number of rachitic and anemic infants, and has found it not only well taken and borne, but actively restorative of the reduced hemoglobin. The dose for infants is 5 grams once or twice daily; for older children, 10–15 grams; for adults, 15–30 grams daily. It may be taken diluted with cold or warm milk or water, or undiluted.

The Danger of Giving Adrenalin in Hemoptysis.—GRAY DUNCANSON (*Brit. Med. Journal*, March 12, 1904).—In a case of recent pulmonary hemorrhage the writer administered adrenalin internally, at first about two drops of a 0.1 per cent. solution, then a smaller dose, every hour until after six hours the hemorrhage ceased. The next day the pulse, which hitherto had been soft and rapid, had become slow and of a high tension. This high tension continued, and numerous small pulmonary hemorrhages occurred in spite of the fact that the adrenalin was given in continually smaller and less frequent doses. The bleeding ceased entirely only when the adrenalin had been altogether discontinued and the pulse had returned to its former low tension. Duncanson concludes from this observation that the practice of giving adrenalin internally in pulmonary hemorrhage is wrong and illogical. Instead of giving a drug that tends to increase arterial tension, one that (like nitroglycerin) tends to lower it, should be given.

Venesection.—WULSTEN (*Deutsche med. Wochenschr.*, 1904, No. 3) reports the case of a man, sixty-three years old, suffering from nephritis and arterio-sclerosis, in which there was extreme pulmonary edema and congestion. Although comatose and apparently moribund, venesection (in which a litre of blood was withdrawn) was followed by prompt recovery. The same condition was effectively combated by the same treatment four times in the course of the following year.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

CARL FISCH, M. D.

Experiments on the Regenerative Capacity of the Brain.—M. BORST (*Ziegler's Beitr. z. Pathol. Anat.*, 1904).—The very extensive and interesting investigations of the author cannot be reviewed in detail. They are based on the insertion of small foreign particles into the brain-substance of rabbits. The material was prepared from celloidin, that by a delicate process was made finely porous. The general results may be described as follows:

It depends upon the degree of destruction caused by the insertion of this material, whether a proliferation of neuroglia accompanied with the formation of spider cells, or a pronounced formation of connective tissue ensues. Of the greatest interest are the processes going on in the minute channels of the foreign body. The portions of brain-substance, that mechanically during the insertion are forced into these channels, always undergo retrogressive changes. But the author could demonstrate, that from the ends of the injured fibres axis cylinders and medullated fibres grew into these pores. They were accompanied by newly formed neuroglia and in varying degree with proliferations of the connective tissue elements of the circulatory structures.

The Occurrence of Cells With Eosinophilous Granulations and Their Relation to Nutrition.—E. L. OPIE (*American Journal of Medical Sciences*, February, 1904.)

Experimental Study of the Relation of Eosinophilous Cells to Infection with *Trichina Spiralis*.—E. L. OPIE (*American Journal of the Medical Sciences*, March, 1904.)

Studying the presence of eosinophilous cells in the guinea pig, Opie found in normal and pathologic conditions, a great variation in their number (up to 30 per cent.) For him these cells originate from the large mononuclears of the bone-marrow by cell division, so that their increase in the blood goes parallel with an increase of the eosinophilous myelocytes in the bone-marrow. These cells do not multiply in the blood or in other organs, and they appear in the latter (spleen, lymphatic glands, etc.), by emigration. In the blood of starving animals their number steadily decreases; only in the beginning of the starvation

period a slight increase occurs. After interrupting the period of hunger by food, their number gradually returns to the normal.

The same author has investigated the eosinophilous cells in guinea pigs after infection with trichinæ. At the end of the second week after feeding the parasites, that means at the time the trichinæ embryos begin their migration away from the intestine, the number of eosinophilous cells rapidly increases to reach the acme at the end of the third week. In the lungs and in the mesenterial glands accumulations of these cells occur, resembling small abscesses. The bone-marrow shows an enormous increase of the corresponding myelocytes. Before death the number greatly decreases. Copious infections cause degenerative changes in the bone-marrow.

Note on a Stain Applicable to Differentiate Leucocyte Counts in the Counting Chamber.—B. ONUF (*Journal of Medical Research*, July, 1904).—What promises to be a great acceleration and increase of exactness of the differential leucocyte count is described by Onuf in this paper. Although, of course, an absolute exactness of these counts neither for practical nor scientific purposes is of any value, as everybody will admit, the combination of the count with the differentiation will be a great relief from the tedious old procedures. Onuf uses the ordinary hematocytometer-pipette, employing as a diluting fluid, a mixture that consists of equal parts of a 12 per cent. formalin solution, a 1 per cent. sodium chloride solution, a $\frac{1}{2}$ per cent. eosin (soluble yellowish in water) solution (all aqueous), and of Unna's polychrome methylene blue. The fluids are mixed and filtered. Under gentle heating for a short time beautiful staining of granulations and nuclei of the leucocytes and a yellowish tinge of the erythrocytes ensues, that remains permanent as long as one and one-half hours. Since the number of leucocytes counted in the ordinary chamber would be too small, the author has constructed a disc, allowing to count differentially five hundred leucocytes (in normal blood.)

It is to be hoped that he will succeed in interesting some firm in the manufacture of this chamber, as it is arranged in a way, that at the same time the count of red corpuscle can be made.

The new method is certainly a great step forward in simplifying and generalizing this important diagnostic and prognostic procedure. It may be said, that the staining mixture must be freshly prepared, as it does not keep with reliability for longer than twenty-four hours.

The Mode of Action of Antitoxins in the Living Organism.—A. WASSERMANN, u. C. BRUCK (*Deutsch. Medic. Woch.*, 1904, No. 21).—The question how antitoxins act on the toxins is not only theoretically, but also practically of great importance. So far the direct chemical combination of these two substances could only be demonstrated in the test tube. It has not been proven as yet, that this explanation obtains, too, for the living organism, a fact that instigated Behring lately to introduce into this process the assumption of the action of vital powers.

Wassermann and Bruck have succeeded by a very ingenious method to show, that the simple chemical binding takes place also in the body of the animal, into which the toxin and antitoxin are injected. They in-

roduced into the posterior extremity of guinea pigs a neutral tetanus toxin-antitoxin mixture, after producing in this organ a local anemia (of vaso-constrictor origin) by the previous injection of suprarenin. Under the influence of this anemia the dissociation of the mixture occurred, part of the toxin was liberated and the animals died of tetanus. After the investigations of Meyer and Ransom, the explanation is given by the fact, that after dissociation the path for the toxin (axis-cylinders) is free, while that for the antitoxin (circulation) is by the action of the suprarenin obstructed. The author could, just as in the test-tube experiment, show, that even in the living organism a dissociation of toxin and antitoxin can only occur, as long as the combination is not stable.

The above experiment repeated with a mixture, in which both substances were left in contact with each other for two hours, left the animals unharmed, because after this time in the test-tube also no dissociation is possible.

The experiments prove conclusively, that, like in the test-tube the binding of toxin and antitoxin, follows in the living organism the same chemical laws, and that there is no need for resorting to the intervention of vital factors.

Experimental Contribution to the Immunity Against Typhoid.—R. J. COLE (*Zeitschr. of Hyg. u. Inf. Krankh.*, Vol. 46, H. 3).—That the lasting immunity against typhoid after an attack cannot be due to the continuous presence and production of anti-bacterial substances, has long since been shown by many observations, demonstrating in the majority of cases the comparatively rapid and complete disappearance of all such qualities of the blood of the patient. It was therefore assumed, that the immunity evidently existing, was due to an insusceptibility of the tissues, a histiogenic immunity. That this explanation certainly is not the only one available, Cole has established by experiments in rabbits. He immunized animals against typhoid bacilli and determined the bactericidal titre of their serum. After a certain time, this gradually decreases and finally reaches the normal proportion. If now, at this period, an infinitesimally small quantity of bacteria is injected (so small that in a rabbit previously not immunized, it will not raise the normal titre at all), the serum shows a sudden and enormous rise of its bactericidal qualities. It appears from this that the receptors, after they have once reacted, acquire a quicker and higher capacity of reacting than receptors, never exposed, possess.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

The Effect of Childbearing Upon Fibroid Tumors of the Uterus.—W. R. DARKIN (*Journ. of Obst. of Brit. Emp.*, August, 1904).—The author deals in this paper only with the pathologic-anatomical changes in fibroids and considers the subject under the headings of pregnancy, labor and puerperium respectively.

Pregnancy.—Fibroids grow in pregnancy practically in all cases. Most probably they grow during the whole course of pregnancy and not, as has been claimed by some writers, only during the earlier months. In most cases the increase in size is mainly due to a true hypertrophy, but frequently the tumors become edematous during pregnancy. The softening brought about by the edema is a rather fortunate occurrence because it makes a tumor, situated in the pelvic cavity, capable of adapting itself to what available space there may be. Necrosis is very rare. Firm peritoneal adhesions may prevent the ascent of the uterus and cause incarceration and abortion. Torsion of the pedicle of a subserous fibroid during pregnancy has been met with in only a few cases.

Labor.—Fibroids that fail to rise from the pelvic cavity during pregnancy are very likely to be injured during labor. Degenerative or necrotic changes may follow. Alterations of position during labor are common. In most cases—though not so often as in pregnancy—a fibroid will, during labor, rise above the pelvic brim. Considerable change of position implies a certain danger of intraperitoneal hemorrhage. Submucous fibroids have been expelled by the fetal head, but, as a rule, they cause abortion. Expulsion of a pediculated fibroid after the expulsion of the fetus may lead to an inversion of the uterus.

Lying-in.—If a fibroid tumor survives the strain of labor without injury, it usually undergoes involution along with the normal muscle fibres of the uterus. In some cases the tumor is afterwards found to be smaller than it was before pregnancy. If this process is repeated on several successive occasions, the fibroid may even disappear, at least in a clinical sense. There are well established instances of fibroids disappearing after a single pregnancy. Expulsion of the tumor during the puerperal state is not at all uncommon.

In conclusion, it may be said that the tumor is not apt to suffer so often or so severely during pregnancy and labor as might be expected.

The Cardiopathy of Uterine Fibromyoma.—THOMAS WILSON (*Ibidem*).—Those who have to deal with severe cases of uterine fibroids cannot fail to be impressed by the frequent association of functional and organic affections of the heart. In seventy-two cases operated upon by the author objective signs of heart lesions were found thirty-three times (myocardial affections in fourteen, murmurs in twelve). No new explanation is offered concerning the etiology of these affections of the heart. (Confer editorial in July number of this journal, page 426.)

Malignant Uterine Complications of Fibro-Myomata of the Uterus.—F. W. N. HAULTAIN (*Ibidem*).—This paper is a polemical one, directed against certain writers in recent literature who emphasized the comparative frequency of malignant degeneration in uterine fibroids. In the author's opinion the reason for this uncalled for alarm is not far to seek. "The wish is father to the thought." "The intrepid gynecologist, glorying in the successes of modern surgical technique, loves to believe that fibroids pre-eminently predispose to malignancy, and must without exception be removed."

The author concedes, however, that fibromyomata may become secondarily malignant, as is generally known, though it is by no means so common as might be inferred. He himself observed a case of this kind. He admits that "it is probable that malignant disease of the corpus uteri is more prone to develop in uteri, the seat of fibro-myomata." Out of nine cases of adeno-carcinoma operated upon by the author three were associated with fibroids of sufficient size to be noticed by the patients themselves, while in the fourth case a small nodule was present. Malignant disease of the cervix, on the other hand, in his opinion is a rare complication of the fibroids. He has, however, in four cases of cervical cancer found fibroids in the uterus. The following explanation is given for the comparative rarity of this form of complication: Fibroids are very frequently associated with sterility [which is denied by all modern writers], and thus the essential predisposing factor for the development of a carcinoma, viz., the laceration of the cervix, is lacking. A tendency of cervical stumps, left after supravaginal amputation of the myomatous uterus for malignant degeneration which was especially asserted by Richelot (April number of this journal, page 266) is denied by the author. Apparently the only argument that he can give for his contention is the fact that in one hundred cases thus operated upon by him he has not seen any malignant degeneration.

The writer suggests that the patient as far as possible should be kept in ignorance of the presence of the tumor; "her life is in no way menaced by its presence." [Which assertion is untenable in the light of the very careful investigations made by Martin, Cullingworth and especially by C. P. Noble.] The author concludes that a tumor in the uterus is worth two in the operator's museum so far as the owner is concerned.

On the Choice of Operation in Myoma.—JOHN W. TAYLOR (*Ibidem*).—The author performs the abdominal total extirpation of uterus and appendages in cases of large sloughing myomas and in cases of malignant growths. As a rule he gives preference to the supravaginal amputation of the uterus if he is forced to take the abdominal route. For smaller tumors, if not much larger than a cricket ball, he considers vaginal panhysterectomy the best method of operation. In very anemic patients, who cannot even stand the shock of the vaginal operation, he removes the uterine appendages per abdomen. He thinks very little of the modern tendency of enucleation of myomata, and believes that this operation should be limited to cases in which there is a single enucleable tumor in the uterus.

Tuberculosis and Pregnancy.—O. FELLNER (*Wiener Med. Wochenschr.*, Nr. 25-27, 1904).—The writer's conclusions are based upon 300 cases observed in Schauta's clinic in Vienna. He believes that in all cases of far progressed tuberculosis the pregnancy should be interrupted at the earliest date. The one form which is the most serious complication of pregnancy is tuberculosis of the larynx. This affection was found to have a mortality of 61 per cent. In the writer's experience serious cases succumbed when labor occurred in the fifth month of pregnancy, and he, therefore, pleads for immediate artificial abortion even in incipient cases of tuberculosis of the larynx. Nothing can be gained in severe cases by interfering with the pregnancy in later months. Marriage should be prohibited in all cases of tuberculosis of the larynx.

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

The Diagnosis of Scarlet Fever and Scarlatinoid Affections.—SCHAMBERG (*Jour. A. M. A.*, August 6, 1904) says that of all the eruptive diseases scarlet fever, in obscure cases, offers the greatest difficulties in diagnosis. In clear, well marked cases the diagnosis is of course easy. But where the rash is faint, the constitutional symptoms mild and the throat and tongue uncharacteristic, errors in diagnosis are very frequent. There is no one symptom which is characteristic of the disease. For we may have scarlet without rash, without fever, or without sore throat. In obscure cases, the discovery of the disease in a person to whom the patient has been exposed, may clarify the diagnosis. Again, the diagnosis may be confirmed in doubtful cases by the transmission of the disease from the suspected patient to another person.

The typical strawberry tongue, when present, is a sign of great value; but in the mild and therefore obscure cases the tongue often fails to show the characteristic appearance. The author does not believe that enlargement of the papillae of the tongue is present in every case, as held by some observers. On the other hand, the tongue in well persons shows a variable amount of prominence of the lingual papillae. Again, the typical strawberry tongue may in rare cases be present in affections other than scarlet fever, notably in severe cases of scarlatiniform erythema. Speaking generally, however, the presence of the characteristic tongue affords strong confirmatory evidence in doubtful cases, while the absence of this sign does not negate the diagnosis. The author denies that the occurrence of desquamation after a scarlatiniform eruption always justifies the diagnosis of scarlet. Not every diffuse rash that desquamates is scarlet fever. Thus the scaling in some cases of desquamative scarlatiniform erythema is much more extensive than occurs ordinarily in scarlet fever.

Too much importance has been attached to the mere fact of desquama-

tion in scarlet. The time of onset of the scaling, its mode of progression and its persistence are of much more diagnostic import.

Desquamation in scarlet usually begins on the face, on the fourth to sixth day. After this it is noted on the neck and the upper portion of the chest. The hands ordinarily begin to peel from the twelfth to the fourteenth day. On the feet peeling often does not begin till the third week.

Scarlatinoid eruptions usually begin to scale earlier, particularly on the hands and feet. Scarlet fever scaling probably persists longer than peeling after scarlatinoid rashes. A form of scaling frequently seen in scarlet is that which begins just beneath the free border of the finger nails, extending thence down the fingers.

With reference to differential diagnosis, the so called erythema scarlatiniforms often offers great difficulties. The rash here may be quite indistinguishable from that of scarlet. It is often sudden in onset, accompanied by malaise and moderate pyrexia. The throat may be reddened, but there is no swelling of the tonsils and no complaint of sore throat. The eruption has about the same duration as that of scarlet, though it may be more brief, and is followed by a desquamation usually branny, but sometimes flaky.

Acute exfoliative dermatitis differs from the above type in degree rather than in kind. This type is particularly prone to recurrence, and many cases of alleged repeated attacks of scarlet doubtless really belong in this category.

These eruptions are due to toxic or septic conditions, or to the action of drugs or sera. Simple scarlatiniform erythema may occur in the course of various infectious processes, such as rheumatism, septicaemia, pyaemia, malaria, typhoid, smallpox, etc. Diphtheria antitoxin and other sera may produce rashes which bear the strongest possible resemblance to scarlet.

The drugs which most commonly give rise to scarlatiniform rashes are quinin, mercury, belladonna, and salicylic acid, though other drugs may have this effect in susceptible subjects.

The differential diagnosis of these rashes from scarlet may at times be very difficult. Absence of swelling of tonsils and uvula, absence of the reddened, papillated tongue, and lack of enlargement of the cervical glands are points of importance. Another point is that the intensity of the rash is out of all proportion to the amount of constitutional disturbance. A history of previous attacks is of course a valuable aid.

In conclusion, the author points out that a proper sense of proportion must be cultivated in formulating the diagnosis of an obscure condition. The various manifestations of scarlet each have a value, and their presence or absence must be given due weight in the conclusions drawn.

Syphilis Haemorrhagica Neonatorum.—HESS (*Archives of Pediatrics*, August, 1904) in connection with a case report of this sort, gives a careful review of the literature of the subject. It appears certain that in these cases syphilis is an important factor, producing changes in the blood vessel walls and in the perivascular tissues, and in the blood itself. It is noteworthy that the course of many of these cases is altogether similar to that of cases of so-called "Spontaneous Haemorrhage of the New

Born." In both the syphilitic and non-syphilitic cases, the more recent investigations show the presence of various types of micro-organisms in the blood and viscera at autopsy. In several cases in fact they have been found *ante mortem*. Among the organisms found may be mentioned streptococci, staphylococci, pneumococci, *b. pyocyaneus* and *b. coli commun.*

In these cases, therefore, we may recognize two etiological factors: (1), hereditary luetic infection, and (2), septic infection.

It is possible that in some cases, as in those reported by Mracek, the syphilitic factor is the only one present. Such cases can be classified strictly as syphilis haemorrhagica neonatorum. Where both factors are present, the author thinks that the cases should be classified as syphilis hereditaria, with haemorrhage due to secondary infection.

With reference to treatment, both the direct and indirect method of systemic treatment should be instituted at once in every case.

The indirect method consists in the administration of large doses of iodids to the mother (supposing that she is nursing her child). Mercurials are without effect when administered in this way.

For direct medication the author prefers the application of Unna's emplastrum hydrargyri mull, using a piece two or three inches wide over the abdomen, to be replaced at the same, or in a different location, every second day.

The inunction method can of course be used also. For internal administration the author advocates hydrar. cum creta gr. one-half to one, or calomel gr. one-tenth to one-twentieth three times a day. Even when anti-syphilitic treatment is instituted at once, the mortality is very high on account of the liability to secondary infection.

The local treatment of the haemorrhages by styptics, etc., the author considers almost valueless, 10 per cent. solution of gelatin or sol. of adrenal in chloral may be tried.

Our greatest hope lies in prophylactic treatment of the mother during pregnancy, and this should be systematically carried out in all suspicious cases.

ORTHOPEDICS.

IN CHARGE OF

NATHANIEL ALLISON, M. D.

Study of a Case of Lateral Curvature of the Spine. A Report of an Operation for the Deformity.—MICHAEL HOKE, M. D., Atlanta, Georgia. (*Atlanta Journal-Record of Medicine*, July and August, 1904).—The case was one of lateral curvature with bony deformity. The writer goes carefully over all the mechanics and various forms of treatment of the condition. He decided to operate and correct the deformity by osteotomy of the ribs, following this with corrective jackets. This is entirely an original procedure, so with great care he made numerous operations on the cadaver and designed a set of instruments especially fitted to the operation. His case was one of extreme deformity in a young woman.

She submitted to three operations and treatment lasting over a year; most of her ribs were divided and her thorax was moulded into a position which relieved the deformity to a marked degree.

The writer states in conclusion that in the future lateral curvature with osseous deformity must be treated as follows:

1. Exercises must be taken in order to do away with all contraction of ligaments, fascia and muscular resistance to flexibility, and to build up the general health. The writer thinks that all the movements of the trunk must be executed in exercise regardless of the influence of such exercise upon rotation of the vertebræ, flexibility being the sole object.

2. The flattened side of the back must be operated upon so that side forces (ribs) applied to the spine may be so weakened and the ribs made so flexible that the plane of the thorax beneath the shoulder may be changed to as near the normal as possible, the flat ribs recurved toward the normal, and the resistance to rotation reduced or destroyed.

3. Then a series of jackets must be applied, using the prominent side as a point at which to apply pressure to obtain counter-rotation. The jackets are to be applied till the bone-union in the ribs is perfectly firm.

4. The curves in the ribs on the prominent side must by operation be restored to as near normal as possible, in order to do away with the prominence and to restore the natural plane of the thorax beneath the shoulder.

5. A series of corrective jackets must be applied until the bone-union is firm and all the correction possible is obtained.

6. A removable jacket and daily exercise.

The Early Diagnosis of Pott's Disease.—FRANK P. VALE, M. D., of Washington, D. C. (*Medical News*, July 23, 1904).—Most every one has seen cases of spinal caries with a well marked deformity that were being treated for stomach trouble or intestinal trouble; the mistake is all too common. Sir Frederick Treves, in the *London Practitioner* (1903, p. 1), confesses that he opened an abdomen for persistent gastric symptoms, and later had the nurse call his attention to a hump on the patient's back. The writer then calls attention to three cases that came under his notice where the diagnosis was wanting. One of these cases was accused of drinking to excess when he developed an unsteady gait, due to paraplegia, and was later circumcised in the hope of curing the loss of control over his bladder and rectum.

Pott, in his original paper written in 1799, called attention to the frequency of abdominal pain.

By Benjamin Brodie in 1818, and by Copeland in 1815, papers were written which covered the complete physical signs of Pott's disease. In spite of this, Jones and Ridlon write in the year 1892 the following: "There seems to be an almost universal belief among the profession that the diagnostic symptom of Pott's disease is tenderness on pressure over the diseased point." One James Earle, a contemporary of Pott, is in part responsible for this error, for he wrote that he could diagnose the disease by making gentle pressure over each vertebra, one after the other. He cured his cases quickly by "caustic issues" and has thus thrown grave doubt on his powers as a diagnostician.

The x-ray now plays an important part in early diagnosis, especially in the cervical cases.

The paper calls for consideration of Pott's disease. No mistake is so reprehensible as to miss the diagnosis, especially where deformity is present. Any one reading the paper will be impressed with the importance of not leaving Pott's disease out of consideration until he is sure that it does not exist.

Congenital Dislocation of the Hip. Report of the Orthopedic Staff of the Boston Children's Hospital, Based Upon Observation of One Hundred and Forty-four Cases.—E. H. BRADFORD, R. W. LOVETT, E. G. BRACKETT, AUGUSTUS THORNDIKE, JOHN DANE. (*Boston Med. and Surg. Journal*, July 28, 1904).—On the subject of congenital dislocation of the hip, nothing has yet appeared that equals the value of this report. It starts in with the cases treated by Dr. Buckminster Brown, who first attempted treatment for this condition, and shows the gradual improvement in the treatment up to the present day. The improvement, though gradual, has been well marked, so that the cases which before the days of Buckminster Brown were regarded as beyond help now are reduced permanently to the extent of 60 per cent. The development of the reduction idea had its beginning in recumbent traction; this was soon discarded for ambulatory traction, which also gave failures. Then came open incision and the various experiments it made possible, such as gouging out the acetabulum, and cases began to be cured. The Paci-Lorenz method, done by Dr. Lorenz himself on eleven cases is included, as is also one case operated upon by Dr. Hoffa, by his open method. The cases where machine stretching was employed to overcome the abductor resistance (twenty-four in number) are given and here we begin to see favorable results, for out of the twenty-four cases sixteen were successful. These last have all been done in 1903, and added to them we have six out of eight successful by manual manipulation. Contrast this with the fact that of the twenty-one cases treated between 1884 and 1896 not one was successfully reduced.

Static Foot Errors. Analysis of One Thousand Cases.—WILLIAM E. BLODGETT, M. D., Boston. (*Journal of Amer. Med. Association*, August 20, 1904).—The object of the investigation was (1) to contribute to the sum of available statistics of static foot error; (2) to draw from the cases any warrantable conclusions. The cases are those that reported for treatment at the Carney Hospital, Boston, during the two years and four months preceding September 1, 1903. The percentage tables are carefully figured out and are interesting. Of all orthopedic cases 40.8 per cent. presented static flat feet—*i. e.*, the foot that presents an error in weight bearing. Two-thirds of the cases were under forty years of age. The order of frequency in which the cases occurred was summer, spring, winter, then fall. In two-thirds of the cases both feet were painful, the other third was about equally divided between right and left. Pain was referred to the feet alone in 68.1 per cent., pain wholly above the feet in but 2.2 per cent. Swelling was localized in over half the cases at the astragalo-scaphoid articulation. Tenderness was most common over the center of the heel. In nearly all the cases the anterior

arch was involved to some extent in the flattening. In 116 cases it was tabulated painful.

Treatment was applied to 86.7 per cent. of these cases in the form of a steel plate made over plaster cast of the individual's foot, so as to correct the error. The others were treated by Thomas soles and plate substitutes. Only 396 of the cases seen carried out the treatment given in a diligent manner; of these 71 per cent. were relieved, 5.3 per cent. were slightly relieved and the rest were entirely unrelieved. The cases treated by the Thomas sole and plate substitutes did not show as good a percentage as the ones treated with a metal plate. The plate had to be changed after a variable period of time in the majority of cases.

Success in these cases requires the intelligent co-operation of the patient, and it should always be made clear to the patient that the plate or shoe is only a temporary crutch that must be discarded as soon as possible.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

Optic Neuritis in Cases of Intracranial Tumor, with Special Reference to the Neuroglial Cells Present.—FLEMING (*Review of Neurology and Psychiatry*, August, 1904).—As a result of the microscopic examination of a number of optic nerves, mostly from cases of intracranial tumor, abscesses and meningitis, a new verification of an old theory with regard to the nature of optic neuritis in cases of intracranial tumor is offered, namely, that a toxin of some special kind is responsible for the condition. The paper gives an account of the theories of optic neuritis as regards its occurrence in intracranial tumors, and also on account of the microscopic appearances described in optic neuritis, and especially the neuroglial changes found in the specimens. They are: (1) A proliferation. (2) The protoplasm of the cell is enormously increased. (3) Many of the larger cells have a distinctly granular cytoplasm. (4) The nuclei of the cells become much larger, show definite karyokenetic figures, and, as a whole, stain more faintly than the normal neuroglial nuclei do. The theory which the author offers to explain the occurrence of optic neuritis in intracranial tumor is that the tumor, either in consequence at all or its position in a special region of the brain, causes a toxic change in the optic nerves. The cerebro-spinal fluid is the agent which conveys the toxin, and this because the neuroglial cell changes are best marked near the pia sheath and certainly bear some relationship to the position of the lymph channels.

Sacral Spina Bifida, with Reference to the Skin Representation of Sacral Nerve Roots.—E. W. TAYLOR (*Boston Med. Surg. Journal*, August 25, 1904).—This is an account of a patient aged thirty-three years who has had a sacral spina bifida since birth, and with this condition there has been incontinence of urine and feces. The pathological condition is as

follows. A defect of development of the sacrum, with resulting spina bifida, producing symptoms referable to the sacral cord through involvement of its nerve roots of predominant sensory character. The tumor is too low for direct involvement of any part of the spinal cord, the result, however, being essentially the same from interference with sensory conditions through the lower nerves, which presumably form part of the walls of the sac. The possibility of operative interference is out of the question, because the tumor is meningo-myelocoele. The points of significance which a study of this case brings out are: The existence of areas of anesthesia from lesion of sacral nerve roots, which in general coincide with Head's description of their skin representation. The retention of sexual capacity in spite of extensive destruction of the sacral nerve roots. The absence of marked disturbance of gait in spite of plantar anesthesia. The practical possibility of physical cleanliness, with both vesical and rectal incontinence.

A Case of Family Tabes Dorsalis of Syphilitic Origin—Tabes of the Mother and of Her Two Hereditary Syphilitic Daughters.—NONNE (*Berl. Clin. Woch.*, No. 32, 1904).—Nonne has held that the syphilitic poison is especially deleterious to the nervous system. A number of cases are here described in which the close relationship between syphilitic infection and a certain family disposition to the development of tabes is brought out. The cases throw a great deal of light on this question, and the author expressly states that the problem of the close affinity between tabes, dementia paralytica and specifically infected nervous system and a family tendency in this direction, and likewise the influence of surroundings as well as specific affinity of the syphilis toxin on the nervous system, needs in every case the closest critical study.

Auditory Symptoms in Cerebral Tumors.—SOUQUES (*Revue Neurologique*, No. 14, 1904).—There are two sorts of symptoms found in cerebral tumors. In one the auditory is itself involved in the tumor growth, and the resulting symptom of unilateral auditory affection is produced. In the other there is no direct involvement of the nerve itself, and the symptoms are generally bilateral. In this form the nerve itself is generally found intact. To illustrate, the author gives the history of a case in which there were distinct signs of auditory involvement in the way of bilateral deafness. There was no lesion of the middle ear. A diagnosis of tumor involving the auditory at the base was made. At the autopsy it was found that the tumor was in the prefrontal region on the left. The author believes that cerebral tumors in general, especially if they grow rapidly, are capable of producing alterations in the inner ear on account of the augmentation of the pressure of the cerebro-spinal fluid. Auditory troubles of more or less intensity may follow. This condition is analogous to the papillitis of the optic nerve.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. JOHNSON, M. D.

Surgical Anatomy of the Normal and Enlarged Prostate.—WALKER (*British Med. Jour.*, July 9, 1904).—An exhaustive description of the structure and relations of the normal prostate and the changes that take place as the organ enlarges, is given. It seems that the capsules around the prostate are not accurately described in the text-books. Walker finds that the prostate has a capsule of its own which surrounds it and sends partitions into it. This capsule is quite closely attached to the parenchyma. The prostate with its capsula propria is surrounded by another capsule, which is made up of the pelvic fascia, and to which the connection is not so intimate. In hypertrophy the capsula propria is thickened, and thus more individualized.

Findings in four cases at the autopsy of patients who died shortly after a prostatectomy, gave the author an opportunity to find out what was done upon cases operated upon after Freyer's method, an account of which is given in detail. That a small piece of prostatic tissue was, rarely, left behind after the enucleation, appears to be accidental. The prostatic urethra was torn at the veru montanum, where the prostatic glands empty into the urethra, the ejaculatory ducts remaining as a tongue-like projection.

One Hundred and Ten Cases of Total Enucleation of the Prostate for Radical Cure of Enlargement of that Organ.—FREYER (*The Lancet*, July 23, 1904).—The operation of partial prostatectomy—that is, the removal of the projecting lobes into the bladder, which was first done by Bel-field—was inadequate because the bladder failed afterwards to regain its tone, and the prostatic tissue that was left formed a nidus for the reappearance of the growth. The usual description of the prostate tunneled by the urethra is erroneous. The two prostatic lobes develop separately, and in foetal existence are apart and distinct. Later, these two lobes are connected with each other by the anterior and posterior commissures, the urethra, as well as the ejaculatory ducts, lying between the two lobes. The prostate, then, is composed of two glands almost as separate and distinct as the testicles, which empty through their ducts on each side of the caput gallinaginis. They are surrounded by distinct capsules, which are fused together in the median line.

Based on this anatomy, Freyer's operation is done in this wise: After the ordinary cystotomy, with the fingers of one hand in the rectum pressing up on the prostate, the index finger of the other hand, in the bladder through the opening above, scratches its way through the mucous membrane of the bladder over the most prominent projection of the prostate in the bladder until the capsule proper of the prostate is reached. Following the capsule the finger enucleates through this opening the entire prostate, sometimes leaving the prostatic urethra, sometimes rupturing it—it making no difference in the results. As the

prostate enlarges, it pushes its way through the bladder wall until the inside projection is scarcely covered by anything but the mucous membrane. While the ideal of Mr. Freyer's operation is to leave the urethra intact, yet it is not always done. He reports 110 cases of prostatectomy done by his method, the ages ranging from fifty-three to eighty-four years, with an average of sixty-eight years. The weight of the prostates removed ranged from three-fourths of an ounce to fourteen and one-half ounces. Of the 110 cases three proved to be cancerous, leaving 107 cases of adenomatous prostates. Of these, 97 were successful—completely successful.

This operation is no half-way measure; a complete cure may be guaranteed. Mr. Freyer considers the results he has obtained wonderful, and equally startling is the low mortality as compared with that of other surgical operations. He has encountered no subsequent contraction showing a tendency to stricture.

Unsuspected Lesions in Movable Kidneys Discovered During Nephropexy.—TAYLOR (*Annals of Surgery*, August, 1904).—Out of thirty cases of nephropexy, in three (or 10 per cent.) unsuspected lesions were found. Five cases are quoted by the author in which during a nephropexy other disease than the mere looseness of the kidney presented itself, two of which were renal calculus, one hydro-nephrosis and congenital smallness of the ureter, and two renal tuberculosis. From a consideration of these cases it may be regarded as conclusively proved that a movable kidney is not uncommonly the seat of some lesion. If a patient suffers from a movable kidney which gives rise to definite symptoms, there is absolutely no reason why he or she should not be operated upon and obtain the relief to be derived from a well-performed nephropexy. In this operation the kidney should be brought through the wound in the loin for careful inspection and palpation before it is stitched in its proper position.

Transverse Ectopy of the Testis.—BERG (*Annals of Surgery*, August, 1904).—In this case the left testicle lay at the bottom of the left half of the scrotum, and was of fair size. The right testicle was at the left internal ring, where a hernia existed. Both testicles and cords were intimately connected with a hernial sac on the left side. Both cords passed through the left inguinal canal. The scrotum showed no evidence of division into two compartments. The right internal ring was closed. Both testicles and cords were treated, when operated upon, as one, the testicles being pulled into the left scrotum and the hernia sac closed. Six months later no return of the hernia. Both testicles movable and in the left scrotal pouch.

Treatment of Rupture of the Posterior Urethra.—VAN HOOK (*Med. Rec.*, August 20, 1904).—In this article the author reviews the subject of treatment of rupture of the posterior urethra, and cites his method of finding the posterior portion of the urethra, as follows:

With the patient in the lithotomy position and an adequate perineal wound, place the volar surface of the index finger against one of the rami

of the pubic bone. Cause the finger to follow the arch of the pubes from a point chosen on one side to a point corresponding on the other side. The finger being moved transversely across the perineal structures, with no important tissues between it and the rectum, the urethra is necessarily felt between the finger and the pubic arch. It slips under the finger as a broad, somewhat flattened band. The urethra being fixed by two fingers against the pubic arch, the soft mass in which it lies may be boldly incised with a knife.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

Preliminary Report of a Peculiar Infection of the Mouth and Throat with a New Variety of Oidium Resembling Thrush.—R. R. OLIVER, M. D. (*California State Journal of Medicine*, August, 1904) —During the last year the author has seen sixteen cases of this peculiar infection of the mouth, tonsils and pharynx. The condition varies in severity, in extent, acuteness and chronicity. Most of them were chronic and in persons over twelve years. The acute form is seen in children under twelve years. The first symptom noticed is a hard, dry, itchy paroxysmal cough, difficulty and pain in swallowing, coryza, aching back and limbs. In the mouth one first sees a coated tongue, strawberry in character, inflammation of the mouth, uvula and pharyngeal wall. This is soon followed by enlargement of uvula and tonsils until they nearly meet, the tonsil being covered with a small amount of thin grayish white membrane, cellular-like, the uvula remaining clean. The cervical and submaxillary glands become enlarged and tender. Temperature may remain normal or go up to 103. The membrane on the pharyngeal wall forms a "V" shape, apex downward, and is definitely outlined. This with the membrane on the tonsils, which thickens in patches, becomes adherent and is elevated and bleeds if irritated. About this time small, gray, elevated, hard and firm patches occur on the tongue in the center and may reach to the tip and extend over the sides. They are about the size of a large pin head and larger. The glands of the neck become larger and the cellular tissue in some cases is edematous. Temperature may go to 103. The patches on the tongue may unite and form larger patches. They are elevated, firm, furry and can be removed only with difficulty and pain. At this time the symptoms in the pharynx subside and disappear, leaving a red, granular surface. The tonsils next clear and deep ulcers punched out in appearance may ensue. The disease then undergoes gradual involution. However, the patches on the tongue may enlarge and new ones form until it has a pinto appearance, or they may slough and fall out, leaving ulcers, or it may swell and protrude from the mouth. These ulcers on the tongue may remain from three to six months. Cover-slip smears from the mouth show numerous round or ovoid bodies 6 to 8 u. in diameter, with double contour, staining

lightly, except a larger chromatin granule situated at the thick end; joining at this point by a constricted neck is a more or less long, thin thread which may or may not be jointed. These threads may be branched. The author succeeded in obtaining a pure culture upon 8 per cent. glucose agar to which was added 1 per cent. HCl. The cultures grow slowly, taking six to seven days. Upon animals, when injected into the general circulation (rabbits), it forms multiple abscesses in all the organs except the lungs, millet seed in size. Pure cultures were obtained from these abscesses. Rabbits died in three and one-half to five days. Subcutaneous injection causes abscess at the site of the puncture, with abscesses in the surrounding skin. In two instances three patients in one family were affected, one after the other. A professional friend of the author, working at the table where he was doing his autopsies on rabbits, became infected and showed all the acute symptoms on the pharynx, tonsils and tongue. In this case pure cultures were obtained.

Hyperidrosis Pedum and Its Treatment by Baths of Permanganate of Potash.—LUDWIG WEISS, M. D. (*J'l American Med. Association*, August 6, 1904).—The author's line of treatment is as follows: All cases are started with 1 per cent. solution, temperature 104°. The fluid in the receptacle should be ankle deep and the foot immersed in it fifteen minutes. The foot is then dried by patting with old cloths. This is done at night just before bedtime. Next morning the foot is dusted with the following powder: Potassium permanganate, 13.0; aluminis, 1.0; talcum, 50.0; zinc oxid, lapidis, calaminaris, aa 18.0. Shoes and stockings are changed daily. Next day the permanganate bath is again taken for fifteen minutes, and this procedure continued from two to three weeks, but the strength of the solution is increased 2 per cent. gradually. The advantages in this treatment are: 1. The remedy employed is absolutely devoid of any danger, is painless and heals the dreaded fissures without the painful application of silver nitrate. 2. It may be employed in every stage and form of sweating feet. 3. Relapses are less common than in other forms of treatment. 4. The dusting powder has made the intervals of relapse even longer than three months.

A Case of Onychomycosis Blastomycetica.—DR. EMMA DUEBENDORFER (*Dermat. Centralblatt*, July, 1904).—The patient was thirty-two years old. Disease started on the fingers of the left hand two and a half years before. There was swelling and redness of the nail. At consultation the last phalanx of the second finger of the right hand and the third finger of the left hand were slightly swollen. The nail was broken and split up. Pure cultures of the blastomycetes were found in the pus from the nails. Finger nails were extirpated, embedded in paraffine. Stained by Gram, Weigert and other methods. In the nail substance blastomycetes were found.

Lepra of the Ovaries.—L. GLUECK and R. WODINSKI (*Archiv. f. Dermat. und Syphil.*, T. lxvii, p. 39).—After a number of clinical, histological and bacteriological researches of the leprous ovaries and testicles, the

nature of leprosy in these organs has not been absolutely determined, and the cause of impotency in lepers is yet to be elucidated. This also applies to the apparent sterility of leprosy women. In many of the leprosy females menstruation is irregular or arrested. In the report of the Commission of the National Leprosy Fund, 364 marriages of lepers, in which one or both parties had the disease, gave, after the beginning of the leprosy, 468 infants. The authors have examined the ovaries of six females who had died of leprosy. In all of these cases they have found chronic interstitial inflammation in the form of sclerosis of tissues, occasional atrophy or hyperplasia of the organs. Chronic leprosy oophoritis is explained in the following manner: The bacilli enter the tissues through the veins and cause by their toxins an irritation of the vessels and their obliteration. At the same time the perivascular connective tissue undergoes chronic cellular proliferation. From the partial or complete obliteration there is damming of the peripheral parts of the organ followed by an atresia of the primordial follicle.

Lichen Scrofulosorum.—F. PORGES (*Abstract Annales de Dermat. et de Syphil.*, June, 1904).—Porges reports two cases of this affection. The first occurred in a young man of seventeen. The histologic picture occurred in accordance with the researches of others, the presence of true tubercles, with all their characteristics, round cells, epithelial cells and giant cells. The tubercles are constantly in connection with the follicle. The other case, a young man of nineteen years, developed the disease consecutive to the injection of tuberculin. This occurrence has been known before and it may be explained by the existence of a latent tuberculosis reacting to the influence of the tuberculin.

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

Ozæna (Atrophic Fetid Rhinitis) a Cause of Gastritis.—ADOLPH BRONNER (*British Medical Journal*, July 16, 1904).—One of the most characteristic symptoms of ozæna, apart from the offensive smell, is the peculiar pale, ashy complexion of the patient. A bad taste in the mouth in the morning, with vomiting and no appetite, are common complaints. These symptoms are due to the passing of the offensive nasal discharge, full of bacilli, into the stomach, causing a fatty degeneration of the glandular elements and consequent incurable indigestion. The author has washed the stomachs of several patients during the early morning, and was amazed at the offensive condition of the contents. Several cases are cited in which a cure of the nasal discharge resulted in a cure of the gastric trouble. As to the treatment of ozæna, the writer states that one or more of the accessory sinuses are usually involved, and, unless they are opened and treated, the ozæna cannot be cured. He finds that

formalin used as a spray or douche prevents the formation of crusts and removes the offensive smell better than any other remedy.

The Local Treatment of Hay Fever.—FULTON (*Journal A. M. A.*, July 30, 1904).—The author states that he has had remarkable success in the treatment of hay fever by means of local applications of quinine. The treatment consists of the employment of a saturated solution of the quinine sulphate in sterilized water as a nasal spray, and the application to the mucous membrane of the nose of an ointment consisting of quinine and vaseline in the proportion of 30 grains to the ounce, the application being made every six hours. The use of the spray alone will not suffice, but should be made as an adjunct to the ointment. Spraying the nose will at once stop all the symptoms of coryza, but the effect will soon disappear unless followed by a thorough application of the ointment. The ointment can be applied by means of the little finger. If the bitter taste of the quinine should be objectionable, euquinine can be substituted. Fulton believes quinine to be a remedy of actual value in the treatment of hay fever, and states that it will promptly and completely relieve a large proportion of the cases.

The Importance of Serum Agglutination in the Early Diagnosis of Primary Tuberculosis of the Middle Ear.—A. DE SIMONI (*Gazzetta Degli Ospedali e Delle Cliniche*; rev. *N. Y. Med. and Phila. Med. Jour.*, July 30, 1904).—The author recommends the employment of the serum agglutination reaction in the early diagnosis of tuberculous disease of the middle ear. He bases his reasoning upon the great usefulness of this reaction in the diagnosis of pulmonary tuberculosis, and the necessity for an early detection of tuberculous trouble in the ear. The test consists in obtaining a small quantity of blood serum from a puncture in a finger of the patient by means of a sterilized pipette, and of testing the agglutinating powers of this serum upon certain specially prepared cultures of the tubercle bacillus, known as "homogeneous cultures," prepared according to the method of Arloing. A known number of drops of this culture is added to a known number of drops of the serum, and the mixture is shaken in a tube and allowed to stand at room temperature for from four to six hours. If a flocculent deposit takes place, the reaction is positive; if the contents of the tube remain unchanged, the reaction is negative and if the sediment is scanty and the cloudiness slight, the reaction is uncertain. A hanging drop preparation of the mixture may also be examined, after preliminary staining, in order to confirm the presence of agglutination. The author has performed this test in twenty cases of middle-ear disease, and thinks that it is of great value in determining whether the malady is tuberculous or not.

The Non-Operative Treatment of Aural Inflammations.—PANSE (*Muenchener Medizinische Wochenschrift*, July 5, 1904) states that the laity have as little right to treat the aural cavity as they have to treat any other wound. He calls attention to the dangers of the dropping of hot oil into the canal and the harm done by irrigations with various fluids. The oil forms a paste with the cerumen, which is very difficult to remove, and he cites a number of instances where the canal became com-

pletely obstructed and serious brain complications were the result. He claims that irrigations as ordinarily done, are ineffective, because the fluid rarely reaches the diseased area and a certain amount always remains in the sulcus formed by the drum and the floor of the canal, which becomes a hotbed for the pathogenic organisms. The author employs irrigations only in cases of impacted cerumen and foreign bodies. The middle ear is irrigated only by means of a catheter through the eustachian tube. The effects of localized heat are much more readily secured by warm external applications. When drops are to be employed, the best form consists of a solution of carbolic acid in glycerin. The solutions should never be stronger than 5 per cent., as serious results have been reported when stronger solutions were employed. Paracentesis is urged in all cases where there is a bulging drum membrane, and after cleaning out the canal, a small quantity of a mixture of iodoform and boric acid powder should be insufflated, and a light gauze packing introduced. In order to avoid softening of the epidermis and consequent secondary infection, the canal walls should be mopped every few days with a $\frac{1}{2}$ per cent. solution of nitrate of silver. If these methods are carefully followed many cases will, in the author's opinion, be saved from operation.

The Surgical Treatment of the Peripheral Paralysis of the Facial Nerve; Grafting the Facial Upon the Hypoglossal.—ALEXANDER (*Archiv fuer Dhrenheilkunde*, Band 62, Heft 1 and 2).—After reporting a case of facial paralysis in which the author grafted the facial upon the hypoglossal he reviews briefly the literature on all the reported cases. From his study of the cases, he concludes:

1. The grafting of the facial is not to be undertaken in any case until all other methods for restoring function have been given a thorough trial. Massage and electricity should be tried for at least six months.
2. After that time all cases are to be operated upon: (a) In which no voluntary contractions are present; (b) in which no faradic reaction is present; (c) in which the galvanic reaction becomes less in spite of the treatment a result is to be expected, in cases which are older than six months, only when there is a trace of galvanic reaction remaining.
3. If there is a prompt faradic reaction, even in old cases, conservative treatment is justifiable.

Adenoids in Infants.—JARECKY (*N. Y. Med. and Phila. Med. Jour.*, August 13, 1904).—Adenoids in infants under three months of age are so exceedingly rare that many competent observers denied their existence. In a general search through the literature on the subject, the author found only casual references to the condition. Jarecky reports in detail five cases in which the diagnosis of adenoids was made and the growths removed with a curette, the youngest being only eight days old. In making a diagnosis of adenoids in infants, the writer states that we must naturally depend to a great extent upon inability to nurse properly and noisy breathing, other causes of course must be excluded. He has had a special curette made for the removal of these growths in infants. No anesthesia is employed, as the patients are easily held. No after-treatment is necessary. In conclusion the author emphasizes the

fact that adenoids do exist in infants, and that an early operation saves the patient from the defects caused by ignoring their presence.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

A Case of Foreign Body Remaining in the Lens of the Eye for Six Years with the Lens Remaining Clear.—F. N. LEWIS (*Med. Rec.*, August 6, 1904).—A fragment of steel, 2 mm. in its longest diameter, penetrated the lower nasal quadrant of the cornea and lodged in the lens to the supratemporal side and slightly posterior to the equator. V=20-200. Irritation very slight, and soon subsided.

The practical certainty that removal of the foreign body would lead to the development of traumatic cataract induced the writer to treat the case expectantly, especially as the patient was intelligent and could readily be controlled. The wisdom of this course is now obvious (six years after the accident), the injured eye being entirely free from irritation with V=20-20.

A Criticism of Jequiritol and Jequiritol Serum.—DE WECKER (*Ann. D'Oculist*, June, 1904).—According to De Wecker the original claims regarding the feasibility of a regulated and exact dosage of jequiritol and the possibility of modifying or controlling an attack of jequiritol conjunctivitis by the use of jequiritol serum have not been substantiated by the results of clinical experience.

Jequiritol therapy is painful and disagreeable. Serious complications following the use of jequiritol include clouding of the cornea, the appearance of fresh vascularizations, ulcers of the cornea, deep necrosis of the conjunctiva and dacryocystitis. Occasionally have been observed suppurative bullous keratitis, lid abscesses, cutaneous eczema, erysipelas and parotitis. The method of application, the capacity for absorption of the conjunctiva and the type of the disease are all factors to be taken into account in predicting the probable reaction. Not infrequently a case will fail utterly to react to the three lower strength solutions (I, II and III), and then respond violently to the application of the fourth, or highest, strength solution. The gradual immunization of the conjunctiva by the instillation of jequiritol in increasing strengths may defeat the end desired, as clinicians are pretty well agreed that the reaction to be effective in clearing a thick pannus must be a violent one.

The efficacy of the serum has been seriously called in question by its failure in a number of instances to control the inflammation excited by jequirity.

De Wecker concludes that jequirity, either macerated or powdered, is greatly to be preferred to jequiritol, especially as its use is not followed by serious complications.

A Fatal Case of Diphtheria of the Conjunctiva.—S. STEPHENSON (*Ophthalmoscope*, August, 1904).—A wasted and neglected infant of nine months developed closely adherent membranes on the upper palpebral conjunctivæ four days after the appearance of a conjunctival catarrh. There was a nasal discharge, but no complicating diphtheria of the nose or fauces. Temperature subnormal. Six thousand units of antitoxin were injected without avail, the baby dying (apparently of cardiac failure) on the eighth day of the disease.

Cultures from a fragment of membrane removed during life showed (1) Klebs-Loeffler bacillus, (2) staphylococcus pyogenes albus, (3) streptococcus longus, (4) Koch-Weeks bacillus.

The original infection was thought to be a Koch-Weeks conjunctivitis, upon which was implanted a Klebs-Loeffler infection. An important finding was the streptococcus longus, which, some observers believe, can itself originate a membranous conjunctivitis. Death is ascribed to the toxemia induced by the conjunctival diphtheria.

The writer is of the opinion that conjunctival diphtheria is relatively frequent. Among three thousand cases of ocular disease encountered in two children's hospitals during five consecutive years, 1.26 per cent. were cases of conjunctival disease in which the Klebs-Loeffler bacillus was found. Only three out of a total of forty-three such cases conformed to the text-book description of conjunctival diphtheria. Two-thirds of all cases occurred in children under three years. The majority of cases occurred at the season of the year when the disease was particularly prevalent.

Forty per cent. of all cases were bodily ill. Temperature was often subnormal. The knee jerks were absent in a number of cases. Albuminuria was frequently observed. In seven cases a cutaneous diphtheria accompanied the ocular troubles, and in three cases diphtheria of the fauces was associated. The pre-auricular and angular glands were enlarged in the more severe cases. The cornea was involved in 33 per cent., this complication varying from mere haziness to ulceration. In the large majority of cases the infection was mixed. In 75 per cent. it was unilateral.

The text book description of diphtheria of the conjunctiva should be revised, as the disease is usually rather a mild affair.

Suggestions as to Post-Mydriatic Refraction Tests.—G. M. GOULD (*Annals of Ophthalm.*, July, 1904).—Although some of Dr. Gould's "Sixty-eight Reasons Why Glasses Failed to Give Relief" are a bit attenuated, there is no gainsaying the tremendous importance of carefully attending to apparently trivial details in the measurement of the refraction of the eye and the fitting of glasses. In this short paper the writer considers some of the reasons for the difference of refraction under cycloplegia, and that after the accommodation paralysis has passed off. These differences, as is well known, are occasionally marked, and may be contradictory. In accounting for them the writer would have us bear in mind the following points:

1. A *transient* cycloplegic (homatropin) probably gives results more nearly equal to those obtained without cycloplegia.

2. The drug should be instilled every seven minutes for one hour prior to the tests.

3. Tests should be made at the height of the physiologic effect of the drug.

4. The hyperemia caused by the drug may have some influence on corneal curves and the tension of the muscles.

5. As the inclination of the axis of vision is downward in all near work, the test card at twenty feet should be placed lower than the level of the eyes.

6. Change in the axis of an astigmatism may be induced by muscular tensions, which are presumably different for near and far.

7. The mechanism of accommodation being still imperfectly understood, it is possible that some factor connected therewith may be instrumental in causing the difference observed.

8. There exists a difference in refraction between the central and peripheral parts of the cornea.

9. Binocular fusion may change the axis of an astigmatism, as determined by the monocular test.

10. The selection of the axis of a cylinder should be made only with the head in the perfectly erect posture.

BOOK REVIEWS.

DIAGNOSTIK DER BAUCHGESCHWUELSTE, VON PROFESSOR DR. A. MARTIN in Greifswald, mit 26 Abbildungen im Text. Verlag von Ferdinand Enke in Stuttgart. 1903. Preis: Mk. 8.

This volume of 224 pages forms a part of the *Deutsche Chirurgie*, a work of gigantic dimensions, which covers the field of surgery in all its aspects.

The present volume begins with an enumeration and description of all the diagnostic aids at the disposal of the modern physician, such as inspection, palpation, percussion, auscultation, puncture and exploratory laparotomy. The special part deals with the diagnosis of tumefactions in the abdominal cavity, the various organs being considered separately. Necessarily the author could not limit himself to a study of the new growths, and thus much valuable information will be found concerning the diagnosis of inflammatory changes in the abdominal organs. As it may be expected in a work of this character special stress is laid upon differential diagnosis, and this feature probably will guarantee to Martin's book a most prominent position among works of a similar character. We do not know of a work in the English language which deals with the diagnosis of abdominal tumors in the same exhaustive manner.

OBSTETRIC AND GYNECOLOGIC NURSING. By EDWARD P. DAVIS, A. M., M. D., Professor of Obstetrics in the Jefferson Medical College and in the Philadelphia Polyclinic. 12 mo volume of 402 pages, fully illustrated. Second edition, thoroughly revised. Philadelphia, New York, London: W. B. Saunders & Company. 1904. Polished Buckram, \$1.75 net.

It is necessary for an obstetric nurse to possess some knowledge of natural pregnancy and of its consequent diseases; and as gynecologic nursing is really a branch of surgical nursing, special training and instruction are required to meet the conditions arising. This book just fills the need, everything that the obstetric and gynecologic nurse should know being included. The second edition shows evidence of having been carefully revised throughout, and considerable new matter has been added.

MODERN SURGERY—GENERAL AND OPERATIVE. By JOHN CHALMERS DA COSTA. Fourth edition; rewritten and enlarged, with 707 illustrations. W. B. Saunders & Company, Philadelphia.

One hardly recognizes in this excellent text-book the "Manual" which appeared a number of years back, still the author has followed closely his first general plan, but in the amplification has evolved a work which is as complete as, and much better classified than, most modern text-books. It is a readable, safe book for the student, and an aid to the practitioner, who will be pleased to find so much in such concise but authoritative form. It is modern in every sense, giving the most recent work in every instance.

ANATOMY. A Manual for Students and Practitioners. By HENRY E. HALE. Series edited by V. C. Pedersen. Illustrated with 71 engravings. (Medical Epitome Series.) Lea Brothers & Co. Phila. and N. Y.

The text is well written, accurate and concise, and yet full enough to give all essential details for the student.

THE OPHTHALMIC YEAR-BOOK. A Digest of the Literature of Ophthalmology with Index of Publications for the year 1903. By EDWARD JACKSON, A. M., M. D., Emeritus Professor of Diseases of the Eye in the Philadelphia Polyclinic, etc., with 45 Illustrations. The Herrick Book and Stationery Company. Denver, Colorado. 1904.

The need of a year book of ophthalmology which shall give a succinct account of work published in the preceding year has long been felt by ophthalmic practitioners. The present volume, although of moderate dimensions (260 pages), contains references to recent papers on ophthalmic topics of particular interest to ophthalmic specialists. Dr. Jackson has intentionally omitted reference to papers which merely aim to present to the profession at large well established facts. The work contains: (1) A critical digest of the more important new facts; (2) a list of original publications appearing during the year. The author does not pretend to approach the subject in the all-inclusive way of the German *Jahresbericht*, a publication the result of the combined efforts of a large number of collaborators, but he does give clearly and with sufficient fullness all that the specialist requires to enable him to judge what has been done in any given field during the year. Appended is a list of books, monographs and journal articles arranged alphabetically. The index is full and well arranged.

MODERN OPHTHALMOLOGY. A Practical Treatise on the Anatomy, Physiology and Diseases of the Eye. By JAMES MOORES BALL, M. D., Professor of Ophthalmology in the St. Louis College of Physicians and Surgeons. With 417 Illustrations in the Text and Numerous Figures on 21 Colored Plates. Philadelphia: F. A. Davis Company. 1904.

The author states in the preface that his aim has been "to produce a work which shall teach and which shall be valuable alike to the medical student, to the general practitioner and to the specialist." In thus declining to limit his audience, the author has imposed upon himself a difficult, and, in the opinion of the reviewer, a well-nigh impossible task. From this point of view it should not be regarded as a disparagement of the merits of the work as a whole to say that the author has hardly succeeded in his ambitious design. We imagine that, of the three classes of auditors addressed the work will appeal more strongly to the general practitioner than to either the medical student or the specialist in ophthalmology. The medical student will prefer a more compact volume, which will introduce him to a working knowledge of the subject in as short a time as possible. The specialist, well acquainted with the mere facts of his subject, will demand rather more than the clear and well arranged exposition of the tenets of "modern" ophthalmology, such as Dr. Ball has presented. A text-book to be of value to him must breathe the author's personality and must shed an illumining beam upon his storehouse of facts. The author should possess the faculty of compelling his reader to view the subject from his particular personal standpoint. It is only thus that there results that intense vividness which lifts a personal contribution of the sort above the level of mediocrity.

It is precisely the personal note which is lacking in this otherwise excellent text-book. One cannot help feeling that the author has bestowed an immense amount of care in collating and arranging his material and the views expressed are in general sound and in accordance with accepted modern dicta.

The book is written in a style that is not altogether pleasing. There is a notable absence of variety in the structure of sentences, a defect, perhaps, unavoidable in the presentation of the dry facts of anatomy, but one which greatly detracts from the readability of the main body of the book. A series of sentences taken at random will show a curious and wearisome persistence in the use of "In" and "The" as the initial word. The total effect is lacking in fluency.

The work is beautifully and adequately illustrated. It is refreshing to find an author who scrupulously acknowledges the source of his illustrations, and it must be admitted that he has chosen with discrimination and taste. Many original drawings from dissections by the author are well executed. The colored plates, the handiwork of Miss Margaretta Washington, leave little to be desired.

THE TREATMENT OF FRACTURES, WITH NOTES UPON A FEW COMMON DISLOCATIONS. By CHARLES L. SCUDDER, M. D. Fourth edition. With 688 Illustrations. W. B. Saunders & Co.

The fact of a rapidly succeeding number of editions of a work is evidence enough of popularity, but this is not always an evidence of worth. In this instance the value of the book is the explanation of its popularity, as few books have met a want as well as Scudder's "Treatment of Fractures." It tells in a clear manner the methods of a large medical center which, while in a way provincial, is good because there are still places in this country where Boston methods have not been well enough learned. As a working guide it is excellent, and is doubly available in that the illustrations are most complete and not only amplify the text, but in many instances are sufficiently descriptive in themselves. There is added a new chapter on "Dislocations," which is good. It is hoped that the next editions will contain a larger section on this branch, which is not easily separated from fractures.

THE PRACTICAL MEDICINE SERIES OF YEAR-BOOKS, VOL. VII, PEDIATRICS. Edited by I. A. ABT, M. D. Orthopedic Surgery, edited by JOHN RIDLON, A. M., M. D., June, 1904. Chicago: The Year-Book Publishers.

Dr. Abt certainly deserves great credit for his careful and painstaking review of pediatric literature of the past year. The work has been done most thoroughly, and the value of the review is greatly increased by the critical remarks of the editor, which in and of themselves give evidence of a wide knowledge of the special literature of the subject. The volume is not only instructive but decidedly entertaining as well.

It is to be regretted that Dr. Ridlon's review of orthopedics has been so condensed. The work is fully up to the standard of the editor.

As a whole the volume is an excellent one, and one which we take pleasure in commending highly.

DERMATOLOGISCHE VORTRAEGE FUER PRATIKER. S. JESSNER. Wurzburg: A. Stuber's Verlag. 1904.

No. 5. Die innere Behandlung von Hautleiden. (Internal Treatment) Price: Mk. 0.75.

No. 9. Die Hautleiden Kleiner Kinder (2d Edit.). M. O. 90.

No. 13. Psoriasis. Price: Mk. 0.60.

Dr. Jessner's series of dermatological monographs has been received with the warmest commendation in Germany. The subjects are treated with the greatest clearness, and with remarkable thoroughness. Speaking with the voice of authority, Jessner gives a concise, but comprehensive account, of present day views of the subjects treated.

The monograph on the skin diseases of children is particularly valuable, giving the practitioner a wealth of information which cannot but be of great service. Dr. Jessner deserves the thanks of the profession for his work.

MEDICAL DIAGNOSIS. SPECIAL DIAGNOSIS OF INTERNAL MEDICINE. A Hand-Book for Physicians and Students. By DR. WILHELM V. LEUBE, Professor of Medicine and Physician-in-Chief to the Julius Hospital, Wurzburg. Authorized Translation from the Sixth German Edition. Edited, with Annotations, by JULIUS L. SALINGER, M. D., late Assistant Professor of Clinical Medicine in the Jefferson Medical College, and Physician to the Philadelphia Hospital. D. Appleton & Co., New York. Pp. 1,058; Illustrated. 1904.

The importance of accurate diagnosis as the basis of rational therapy has never been more clearly recognized than at the present day. Leube's well known work has long been regarded as a standard text-book in Germany, embodying, as it does, the results of enormous experience of one of the greatest clinicians of the present day. This is attested by the fact that it has gone through six editions in twelve years.

After a short introduction, pertaining to history taking and methods of examination, the diagnosis of disease, systemically classified, is taken up. The diseases of the circulatory, respiratory, abdominal, genito-urinary and nervous organs and systems, are discussed in detail. Then follow discussions of diseases of muscles, the constitutional diseases, and, finally, the infectious diseases. A noteworthy characteristic of this most valuable work, is the particularly careful consideration of differential diagnosis, set forth with the most admirable clearness and thoroughness.

Dr. Salinger has put the English speaking profession under great obligation for his careful and conscientious work. His translation, while at times too literal for perfection of idiomatic English style, reads easy and well and his editorial annotations are of value.

The book work is fully up to the standard of the publishers, except that the paucity of illustrations is somewhat striking.

Leube's work is sure to find in America the same warm welcome that has been accorded it in Germany, and is a most valuable addition to the list of works on that important branch of internal medicine, diagnosis.

DIE INTERNE BEHANDLUNG DES DARMVERSCHLUSSES MIT BESONDERER BERUECKSICHTIGUNG DER ATROPINBEHANDLUNG. VON DR. VON BOLTENSTERN. (Wurzburger Abhandlungen aus dem Gesamtgebiet der Praktischen Medizin.) Wurzburg: A. Stuber's Verlag (C. Kabitzsch). 1904.

This little pamphlet of 37 pages presents in an adequate and interesting manner the modern standpoint in the treatment of intestinal obstruction. He discusses briefly the etiology and the medicinal and physical treatment (opium, atropin, gastric lavage, high enemata, etc.) of this affection, but concludes that the proper procedure is early diagnosis and early operation.

CLINICAL TREATISES ON THE PATHOLOGY AND THERAPY OF DISORDERS OF METABOLISM AND NUTRITION. By PROF. DR. CARL VON NOORDEN. Part V, Concerning the Effects of Saline Waters (Kissingen, Hamburg), on Metabolism. By PROFESSOR CARL VON NOORDEN and DR. CARL DAPPER. Pp. 92. New York: E. B. Treat & Co. 1904.

This publication is the second edition of a thesis that Dr. Carl Dapper published eight years ago from Prof. von Noorden's clinic. In view of the great interest that balneological methods of treatment are exciting nowadays, this little volume should meet with a general welcome. As a result of careful observations made, not only on healthy individuals, but chiefly upon those suffering from various nutritive and metabolic disorders, the authors come to certain definite conclusions. They find, for instance, that in gastric catarrh with subacidity, the use of saline mineral waters, such as those of Kissingen and Hamburg, leads to an active and permanent increase in the production of hydrochloric acid, whereas in hyperacidity, especially that on a nervous basis, the moderate use of the same waters leads to a diminished secretion of hydrochloric acid. The waters in no wise interfere with the digestion and absorption of any kind of food. Finally, they find that there is reason to believe that the saline mineral waters are of use in the treatment of uric acid retention (gout). The value of the book would be increased by the addition of an index.

MEDICAL SOCIETIES.

INTERNATIONAL CONGRESS OF ARTS AND SCIENCE—PROGRAM OF DEPARTMENT 17, MEDICINE—A DEPARTMENT OF DIVISION E.—UTILITARIAN SCIENCES—MEETING SEPTEMBER 19-25, 1904.
UNIVERSAL EXPOSITION, ST. LOUIS.

Chairman: Dr. William Osler, Johns Hopkins University.

Speakers: Dr. William T. Councilman, Harvard University; Dr. Frank Billings, Rush Medical College.

Section a. Public Health.

Chairman: Dr. Walter Wyman, Surgeon-General of the U. S. Marine Hospital Service.

Speakers: Professor William T. Sedgwick, Massachusetts Institute of Technology; Dr. Ernest J. Lederle, former Commissioner of Health, New York city.

Section b. Preventive Medicine.

Chairman: Dr. Joseph M. Mathews, President of the State Board of Health, Louisville, Kentucky.

Speakers: Professor Ronald Ross, F. R. S., School of Tropical Medicine, University College, Liverpool; Professor Angelo Celli, University of Rome.

Section c. Pathology.

Chairman: Professor Simon Flexner, Director of the Rockefeller Institute.

Speakers: Professor Felix Marchand, University of Leipzig; Professor Johannes Orth, University of Berlin.

Section d. Therapeutics and Pharmacology.

Chairman: Dr. Hobart A. Hare, Jefferson Medical College.

Speakers: Sir Lauder Brunton, F. R. S., London; Professor Mathias E. O. Liebreich, University of Berlin.

Section e. Internal Medicine.

Chairman: Professor Frederick C. Shattuck, Harvard University.

Speakers: Professor T. Clifford Albutt, F. R. S., University of Cambridge; Professor William S. Thayer, Johns Hopkins University.

Section f. Neurology.

Chairman: Professor Lewellys F. Barker, University of Chicago.

Speakers: Professor Shibasaburo Kitasato, University of Tokio; Prof. James J. Putnam, Harvard University.

Section g. Psychiatry.

Chairman: Dr. Edward Cowles, Boston.

Speakers: Professor Th. Ziehen, University of Berlin; Dr. Charles L. Dana, New York city.

Section h. Surgery.

Chairman: Professor Carl Beck, Post Graduate Medical School, New York.

Speakers: Professor Nicholas Senn, Rush Medical College, Chicago; Dr. Frederick S. Dennis, Cornell Medical College, New York city.

Section i. Gynecology.

Chairman: Professor Howard A. Kelly, Johns Hopkins University.

Speakers: Dr. L. Gustave Richelot, member of the Academy of Medicine, Paris; Professor John C. Webster, Rush Medical College, Chicago.

Section j. Ophthalmology.

Chairman: Dr. George C. Harlan, Philadelphia, Pa.

Speaker: Dr. Edward Jackson, Denver, Col.

Section k. Otology and Laryngology.

Chairman: Professor William C. Glasgow, Washington University, St. Louis.

Speakers: Sir Felix Semon, C. V. O., Physician Extraordinary to His Majesty, the King, London; Dr. J. Solis-Cohen, Jefferson Medical College.

Section l. Pediatrics.

Chairman: Professor Thomas M. Rotch, Harvard University.

Speakers: Professor Theodore Escherich, University of Vienna; Prof. Abraham Jacobi, Columbia University.